

## **Fishery Management Report No. 20-04**

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# **Area Management Report for the Sport Fisheries of Northern Cook Inlet, 2017–2018**

by

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and

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January 2020

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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)		General		Mathematics, statistics	
centimeter	cm	Alaska Administrative Code		all standard mathematical signs, symbols and abbreviations	
deciliter	dL		AAC		
gram	g	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	H <sub>A</sub>
hectare	ha			base of natural logarithm	<i>e</i>
kilogram	kg			catch per unit effort	CPUE
kilometer	km	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	coefficient of variation	CV
liter	L			common test statistics	(F, t, $\chi^2$ , etc.)
meter	m	at	@	confidence interval	CI
milliliter	mL	compass directions:		correlation coefficient (multiple)	R
millimeter	mm	east	E	correlation coefficient (simple)	r
Weights and measures (English)		north	N	covariance	cov
		south	S	degree (angular)	°
cubic feet per second	ft³/s	west	W	degrees of freedom	df
foot	ft	copyright	©	expected value	<i>E</i>
gallon	gal	corporate suffixes:		greater than	>
inch	in	Company	Co.	greater than or equal to	≥
mile	mi	Corporation	Corp.	harvest per unit effort	HPUE
nautical mile	nmi	Incorporated	Inc.	less than	<
ounce	oz	Limited	Ltd.	less than or equal to	≤
pound	lb	District of Columbia	D.C.	logarithm (natural)	ln
quart	qt	et alii (and others)	et al.	logarithm (base 10)	log
yard	yd	et cetera (and so forth)	etc.	logarithm (specify base)	log <sub>2</sub> , etc.
Time and temperature		exempli gratia		minute (angular)	'
		(for example)	e.g.	not significant	NS
day	d	Federal Information Code	FIC	null hypothesis	H <sub>0</sub>
degrees Celsius	°C	id est (that is)	i.e.	percent	%
degrees Fahrenheit	°F	latitude or longitude	lat or long	probability	P
degrees kelvin	K	monetary symbols		probability of a type I error	
hour	h	(U.S.)	\$, ¢	(rejection of the null hypothesis when true)	$\alpha$
minute	min	months (tables and figures): first three		probability of a type II error	
second	s	letters	Jan,...,Dec	(acceptance of the null hypothesis when false)	$\beta$
Physics and chemistry		registered trademark	®	second (angular)	"
		trademark	™	standard deviation	SD
all atomic symbols		United States (adjective)	U.S.	standard error	SE
alternating current	AC	United States of America (noun)	USA	variance	
ampere	A	U.S.C.	United States Code	population sample	Var var
calorie	cal	U.S. state	use two-letter abbreviations (e.g., AK, WA)		
direct current	DC				
hertz	Hz				
horsepower	hp				
hydrogen ion activity (negative log of)	pH				
parts per million	ppm				
parts per thousand	ppt, ‰				
volts	V				
watts	W				

***FISHERY MANAGEMENT REPORT NO. 20-04***

**AREA MANAGEMENT REPORT FOR THE SPORT FISHERIES OF  
NORTHERN COOK INLET, 2017–2018**

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January 2020

The Fishery Management Reports series was established in 1989 by the Division of Sport Fish for the publication of an overview of management activities and goals in a specific geographic area, and became a joint divisional series in 2004 with the Division of Commercial Fisheries. Fishery Management Reports are intended for fishery and other technical professionals, as well as lay persons. Fishery Management Reports are available through the Alaska State Library and on the Internet: <http://www.adfg.alaska.gov/sf/publications/>. This publication has undergone regional peer review.

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*This document should be cited as follows:*

*Oslund, S., S. Ivey, and D. Lescanec. 2020. Area Management Report for the sport fisheries of northern Cook Inlet, 2017–2018. Alaska Department of Fish and Game, Fishery Management Report No. 20-04, Anchorage.*

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## ABSTRACT

This report provides a detailed summary of the sport fisheries occurring within the Northern Cook Inlet Management Area (NCIMA) and their performance during 2017–2018. Included are organizational, historical, and geographic descriptions of the NCIMA and its management units and programs, a historical overview of each fishery and its management, and the sport fishery performance and escapement of each fishery during 2017–2018.

**Key words:** Northern Cook Inlet Management Area, Knik Arm Management Unit, Eastside Susitna Management Unit, Westside Susitna Management Unit, West Cook Inlet Management Unit, sport fisheries overview, stocked lakes, Chinook salmon *Oncorhynchus tshawytscha*, coho salmon *Oncorhynchus kisutch*, sockeye salmon *Oncorhynchus nerka*, rainbow trout *Oncorhynchus mykiss*, northern pike *Esox lucius*, personal use fisheries, dip net fisheries, subsistence, educational fisheries, Alaska Board of Fisheries

## INTRODUCTION

This report provides a detailed summary of the sport fisheries within the Northern Cook Inlet Management Area (NCIMA). Included are a description of the management area and programs related to management of area fisheries. Fisheries are described and organized by species and management unit. A historical overview and description of each fishery, historical harvest and escapement, management strategies and objectives, and sport fishery performance and escapement during 2017–2018 are discussed.

## MANAGEMENT AREA DESCRIPTION

The Northern Cook Inlet sport fish management area (NCIMA; Figure 1) includes all freshwater drainages and adjacent marine waters of Upper Cook Inlet (UCI) between the southern tip of Chisik Island and the Eklutna River, excluding the upper Susitna River drainage upstream of the Oshetna River confluence. The management area encompasses approximately 30,000 square miles and is dominated by the Susitna River drainage, which originates in glaciers of the Alaska and Talkeetna mountain ranges and flows south about 200 miles to Cook Inlet near Anchorage. Most sport fisheries in the NCIMA are easily accessible by road or jet boat, except remote West Cook Inlet (WCI) waters, which are accessible only by boat or aircraft.

The NCIMA is divided into 4 major units (Figure 1) for the purposes of management and harvest reporting:

- 1) The Knik Arm Management Unit (KAMU) includes all waters bounded on the north by Willow Creek (not including Willow Creek); on the west by a north-south line running one-half mile east of the Susitna River; on the south by Cook Inlet, Knik Arm, and the Eklutna River (not including the Eklutna River); and on the east by the upper Susitna River drainage upstream of its confluence with the Oshetna River. All adjacent marine waters of Cook Inlet are included.
- 2) The Eastside Susitna Management Unit (ESMU) includes all drainages of the upper Susitna River upstream of the confluence with the Chulitna River, to and including the Oshetna River drainage; all eastside drainages of the Chulitna River; and all eastside drainages of the Susitna River downstream of its confluence with the Chulitna River, to and including Willow Creek to the south. This management unit has no marine waters.

- 3) The Westside Susitna Management Unit (WSMU) includes all westside drainages of the Chulitna River, all westside drainages of the Susitna River downstream of its confluence with the Chulitna River, and the eastside drainages of the Susitna River within one-half mile of the Susitna River downstream of Willow Creek. This management unit has no marine waters.
- 4) West Cook Inlet Management Unit (WCIMU) includes all freshwater drainages entering Cook Inlet between (and excluding) the Susitna River and the latitude of the southern tip of Chisik Island, and all adjacent marine waters of Cook Inlet.

In terms of political geography, a major portion of this management area is very similar to the boundaries of the Matanuska–Susitna Borough, but the WCIMU extends into the Kenai Peninsula Borough. The State of Alaska is the principal land manager in the NCIMA. Other significant land managers include the Matanuska–Susitna Borough, the Kenai Peninsula Borough, various Native corporations and villages, and the federal government.

## **FISHERY DEVELOPMENT AND REGULATION**

The waters of the NCIMA fall within 4 sport fishing regulatory areas: the Knik Arm (same as the KAMU described above for management and harvest reporting), the Susitna River (includes ESMU and WSMU), West Cook Inlet (same as WCIMU), and the Cook Inlet–Salt Water Regulatory area. Regulations governing the sport fisheries of the Knik Arm, the Susitna River, West Cook Inlet, and the Cook Inlet–Salt Water Regulatory areas are established in Chapters 60–62 and 58, respectively, of Title 5 of the Alaska Administrative Code. Regulations pertaining to other Cook Inlet fisheries, including subsistence (Chapter 01), personal use (Chapter 77), and educational permits (Chapter 93), as well as statewide provisions (Chapter 75) and commercial fisheries (Chapter 21), are also contained in Title 5 of the Alaska Administrative Code.

The process of developing fishing regulations appropriate for fisheries in the NCIMA occurs within the established Alaska Board of Fisheries (BOF) process. Public input concerning regulation changes and allocation issues is provided for in this process through various means including submission of proposals, direct testimony to the BOF, and participation in local fish and game advisory committees. Advisory committees have been established throughout Alaska to assist the BOF and the Alaska Board of Game (BOG) in assessing fisheries and wildlife issues and proposed regulations. Active committees meet several times each year. Division of Sport Fish (SF) staff and other Alaska Department of Fish and Game (ADF&G) divisions are often invited to attend the committee meetings. In this way, advisory committee meetings allow for direct public interaction with ADF&G staff involved with resource issues of local concern. Within the NCIMA there are 5 ADF&G Advisory Committees: Denali, Matanuska, Susitna, Tyonek, and Mount Yenlo (Appendix A1). ADF&G staff also interact frequently with the Anchorage Advisory Committee, whose constituents and concerns affect the NCIMA. Under the current operating schedule, the BOF meets on a 3-year cycle. Proposals regarding finfish species within the NCIMA were addressed most recently in February 2017. The next BOF meeting to address NCIMA issues is scheduled for 2020. Appendices B1–B5 provide summarized histories of BOF regulatory actions for select fisheries.

## **MANAGEMENT PLANS**

Upper Cook Inlet fisheries have been the focus of intensive allocation battles for many years. These conflicts have led the BOF to establish numerous management plans and policies to guide

the area's fisheries. These plans attempt to ensure sustained yield of the area's fish resources, as well as establishing allocations, management actions, and guidelines. There are presently 14 management plans or policies that the BOF has adopted that impact NCIMA fisheries (Appendix C1).

## **SPORT EFFORT, HARVEST, AND CATCH**

Beginning in 1977, sport fishing effort in the NCIMA has been estimated by ADF&G using a mail survey called the Statewide Harvest Survey (SWHS) (Mills 1979–1980, 1981a–b, 1982–1994; Howe et al. 1995, 1996; Alaska Sport Fishing Survey database [Internet]. 1996–present available from <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>). The SWHS estimates the number of angler-days of sport fishing effort expended by anglers fishing Alaskan waters as well as the harvest and, beginning in 1990, catch (number harvested plus number released) of important sport fish species. The SWHS is designed to provide estimates of effort, harvest, and catch by site but is not designed to provide estimates of effort directed towards a single species at a site. Unless noted otherwise, all estimates of effort, harvest, and catch that follow are from the SWHS<sup>1</sup>.

The NCIMA is composed of 2 complete SWHS reporting areas and a portion of a third (Jennings et al. 2015). These areas are as follows: 1) the Knik Arm Drainage Area reporting unit (Area K), 2) the West Cook Inlet reporting unit (Area N), and 3) the Susitna River Drainage reporting unit (Area M). Area K covers the KAMU, and Area N includes the WCIMU but also includes fresh and marine waters between the southern tip of Chisik Island and Cape Douglas, an area outside of the NCIMA. Area M includes the ESMU and WSMU but also includes several rivers and many lakes north of the Oshetna River boundary of the NCIMA. Fisheries outside of the NCIMA are not included in this report.

### **Effort**

From 1977 through 2016, an average of 277,249 angler-days were expended by anglers fishing NCIMA waters (Table 1). Average effort expended by anglers fishing NCIMA waters from 1977 through 2016 has represented 19% of the average Southcentral Region effort<sup>2</sup> (Region II) and 13% of the average statewide angling effort. Angler effort in NCIMA peaked at 403,805 angler-days in 1992 (Figure 2). From 1995 through 1998, and again from 2009 to 2017, angler-effort fell abruptly, mirroring years when major Chinook salmon (*Oncorhynchus tshawytscha*) fisheries were either closed or severely restricted. Total effort for NCIMA averaged 188,910 angler-days from 2012 to 2016 (Table 1). The Kenai Peninsula sport fish management area is currently the only management area in Alaska that receives greater use by recreational anglers (SWHS database).

During 2017, anglers spent an estimated 157,370 angler-days fishing NCIMA waters, a new record low of measured angler-days. Effort in 2017 represented 12% and 8% of the Southcentral Region and total statewide angling effort, respectively (Table 1).

About 40% of the average effort for 1977–2016 from the NCIMA has occurred in the Knik Arm Management Unit (KAMU; Table 1). From 1977 to 2016, KAMU waters supported an average of 111,948 angler-days of fishing effort. Nearly all the effort over this period was expended in fresh

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<sup>1</sup> The most current SWHS estimates were obtained from <https://www.adfg.alaska.gov/sf/sportfishingsurvey/>; published estimates may differ.

<sup>2</sup> ADF&G, Division of Sport Fish, Southcentral Region (i.e., Region II) includes the following management areas: Anchorage, Bristol Bay, Kodiak–Aleutians, Lower Cook Inlet (Kenai), Northern Cook Inlet (Matanuska–Susitna), Prince William Sound, Seward–North Gulf Coast, and Upper Kenai Peninsula.

water (Table 2). The Little Susitna River is a heavily fished stream in the KAMU averaging 31,024 angler-days of effort for the period 1977–2016 (Table 2, Figure 3). Effort on Jim Creek has dropped recently; the most recent 5-year average (2012–2016) is now 7,295 angler-days, and only 3,299 angler-days of effort were expended in 2017. Effort has decreased with poor coho salmon (*O. kisutch*) runs and restrictions to the fishery. A terminal Chinook salmon fishery at the Eklutna Tailrace, begun in 2002, and a coho salmon fishery, begun in 1999, have also contributed to increased effort in the KAMU. During 2017, the KAMU represented 47% of the effort in the NCIMA (Table 1). Other major fisheries occur in the many stocked lakes in the basin (notably in Finger Lake and the Kepler Lake complex) and at various road-accessible streams including Cottonwood and Wasilla creeks and the Big Lake drainage (Figure 3). A limited saltwater (i.e., marine) fishery also occurs off the mouth of Fish Creek in Knik Arm (Figure 3).

Anglers fishing the Eastside Susitna Management Unit (ESMU) from 1977 through 2016 expended an average of 89,180 angler-days of effort (Table 1), representing 32% of the average sport effort from all NCIMA waters. A total of 45,090 angler-days were spent in this area during 2017, a new record low (Table 3). Major fisheries occur in Willow Creek, Montana Creek, Talkeetna River, and Sheep Creek (Figure 4). These fisheries were restricted to catch-and-release fishing for Chinook salmon for 2017 and closed for 2018.

Anglers fishing the Westside Susitna Management Unit (WSMU) from 1977 through 2016 expended an average of 63,973 angler-days of effort (Table 1). This effort has represented 23% of the average effort from all NCIMA waters during this time period. There was a total of 30,850 angler-days of effort during 2017, the lowest effort since 1977 (Table 4). Alexander Creek, a once major Chinook salmon fishery, has been closed to all Chinook salmon fishing as of 2008. The Deshka River and Lake Creek each compose about 32% and 23% of the total WSMU effort, respectively (1977–2016 averages). Other moderate to minor fisheries with less fishing effort occur in the Yentna River drainage, including the Talachulitna River (Figure 5). Small amounts of angler effort occur in numerous remote lakes in the area.

From 1977 through 2016, anglers fishing West Cook Inlet Management Unit (WCIMU) waters expended an average effort of 12,147 angler-days of effort (Table 1). This effort represents 4% of the average effort from all NCIMA waters for the same period. A record total of 20,459 angler-days occurred during 2005 (Table 5), the result of increased fishing effort at Big River Lakes. WCIMU effort in 2017 of 7,967 angler-days was below the 2012–2016 average of 11,687 angler-days (Table 1). The sockeye salmon (*O. nerka*) fishery at Big River Lakes (Big River drainage, including Wolverine Creek) has developed during the last decade into the largest fishery in WCIMU; other major fisheries include the Kustatan, Chuitna, and Theodore rivers (Figure 6).

## Harvest

From 1977 through 2016, an average of 183,728 fish were caught and kept (i.e., harvested) by anglers fishing NCIMA waters (Table 6). In 2017, 81,343 fish were harvested in NCIMA, below most harvests since 1992 (Figure 7) and below the 1977–2016 average (Table 6). Coho salmon, rainbow trout (*O. mykiss*), and Chinook salmon accounted for 32%, 17%, and 11% of the average harvest respectively from 1977 through 2016 (Table 7; Figure 8). In 2017, the Chinook salmon harvest of 3,493 fish was well below the 1977–2016 average of 20,575 (Table 7).

Fish from KAMU accounted for 42% of the average number of fish caught and kept (harvested) within the NCIMA during 1977–2016 (Table 6). Coho salmon and rainbow trout dominated the harvest (Table 8). The Eastside Susitna and Westside Susitna management units accounted for



26% and 25% of the average NCIMA harvest during this time period, respectively (Table 6), with coho salmon, Chinook salmon, pink salmon (*O. gorbuscha*), rainbow trout, and Arctic grayling (*Thymallus arcticus*) dominating harvests (Tables 9 and 10). The WCIMU accounted for 7% of the average (1977–2016) NCIMA harvest (Table 6), with coho and sockeye salmon accounting for the majority of the WCIMU harvest (Table 11).

### **Catch-and-Release**

Estimates of the number of fish caught and released by anglers fishing NCIMA waters became available for the first time during 1990 (Mills 1991).

The proportion and type of fish released by anglers varies within and among management units. On average, pink salmon, chum salmon (*O. keta*), Arctic grayling, and rainbow trout had the greatest release percentages of angled fish species during 2004–2017 (Table 12). The percentage of Chinook salmon released has increased since 2011, most likely a result of emergency orders issued in 2013–2017 to restrict ESMU fisheries to catch-and-release only. In the NCIMA, the percentage of fish released has been greatest in the ESMU since 2013 (Figure 9).

### **OTHER USER GROUPS**

Salmon returning to the NCIMA are harvested by various set and drift gillnet fisheries in Upper Cook Inlet (UCI) commercial salmon fishing districts (Appendix D1). In nearly all cases, harvests in the commercial fisheries are much larger than in NCIMA sport fisheries (Figure 10). The average commercial harvest from 2012 through 2016 was approximately 3.3 million salmon by the various UCI commercial fisheries, whereas during this same period, an average of 67,192 anadromous salmon were harvested annually by sport fish anglers (calculated from Appendix D2 and Table 7, respectively). Chinook salmon are the exception; since 1988, the yearly sport harvest of Chinook salmon in the Northern District has exceeded the commercial harvest in all years until recently. Commercial harvest exceeded sport fish harvest during 2013–2017 (Table 7 and Appendix D2).

Catch sampling of Chinook salmon in the Northern District setnet fishery from 1998 to 2002 revealed an average combined contribution of 4% Deception and Ship Creek stocks (Whitmore and Sweet 1999; Rutz and Sweet 2000; Sweet and Rutz 2001; Sweet et al. 2003). Stock-specific harvest estimates of Chinook salmon from the Tyonek subsistence fishery and the Northern District commercial set gillnet fishery were produced using genetic mixed stock analysis for 2014–2015 (St. Saviour et al. 2019) and 2016–2017 (St. Saviour et al. *In prep*).

The genetic baseline used for 2014–2015 characterized 55 Cook Inlet Chinook populations to estimate stock composition for 4 selected reporting groups: 1) *UCI Northwest*, 2) *Susitna-Matanuska*, 3) *Knik-Turnagain*, and 4) *Kenai Peninsula* (Barclay and Habicht 2015; Table 17). Harvest estimates were produced by area and time strata. Selected areas from the commercial fishery were the southern portion of the General Subdistrict on the western side of Cook Inlet, the northern portion of the General Subdistrict near Anchorage, and the Eastern Subdistrict near the city of Kenai (Table 17). Harvests by area were generally represented by stocks originating in those areas. Harvests in each area changed little over the course of the season. In both years of the study, *NCI Northwest*, *Susitna-Matanuska*, and *Knik-Turnagain* reporting groups composed over 98% of the total harvests in both the Northern District Commercial and Tyonek subsistence fisheries. The *NCI Northwest* and *Susitna-Matanuska* reporting groups composed a majority of harvests in the General Subdistrict (south) (88–96%), and the *Knik-Turnagain* reporting group

composed the majority of harvests in the General Subdistrict (north) (71–89%) in both years. The *NCI Northwest*, *Susitna–Matanuska*, and *Knik–Turnagain* reporting groups composed over 98% of the Eastern Subdistrict commercial harvest in both years, with similar contributions of the 3 reporting groups in 2014 (28–36%) and higher contributions from the *Knik–Turnagain* reporting group in 2015 (56%). In the Tyonek subsistence fishery, the *NCI Northwest* (56%) and *Susitna–Matanuska* (39%) reporting groups composed the majority of the harvest in 2014, and the *NCI Northwest* reporting group made up most of the harvest in 2015 (79%). *Kenai Peninsula* stocks were detected at very low levels or not at all ( $\leq 2\%$ ) (St. Saviour et al. 2019).

The genetic baseline used for 2016–2017 characterized 67 Cook Inlet Chinook populations to estimate stock composition for 6 selected reporting groups: 1) *West*, 2) *Susitna*, 3) *Deshka*, 4) *Yentna*, 5) *Knik–Turnagain*, and 6) *Kenai Peninsula*. The *Susitna* reporting group contributed the largest amount to harvests in the General Subdistrict (south) (34–36%) in 2016 and 2017. The *West* reporting group had the second highest harvest in 2016, at 24%, with similar contributions by *Yentna* (19%) and *Deshka* (14%). In 2017, harvest contributions were similar among *West* (19%), *Yentna* (17%), and *Deshka* (18%). The *Knik–Turnagain* reporting group composed the majority of harvests in the General Subdistrict (north) (66–72%) in both years. Harvest contributions were greatest from the *Knik–Turnagain* (48–60%) reporting group, followed by *Susitna* (21–23%) in the Eastern Subdistrict commercial harvest in both years. In the 2016 and 2017 overall Northern District commercial harvest, contributions were greatest from the *Knik–Turnagain* (32–35%) reporting group, followed by *Susitna* (27–28%). Remaining harvest contributions were similar among *West* (13–14%), *Deshka* (11–14%), and *Yentna* (12–13%). In the 2016 Tyonek subsistence fishery, the largest contributions to harvest were from *Susitna* (32%) and *West* (29%); remaining harvests were from *Yentna* (17%), *Deshka* (12%) and *Knik–Turnagain* (10%). In 2017, the Tyonek subsistence harvest was dominated by *Susitna* (38%). Similar amounts were contributed by *West* (17%), *Yentna* (18%), and *Knik–Turnagain* (16%); *Deshka* contributed 10%. Again in 2016 and 2017, harvest contributions of the *Kenai Peninsula* reporting group ranged from 0–2% across all 3 commercial areas and across commercial and subsistence fisheries (St. Saviour et al. *In prep*).

Fish stocks of NCIMA are also harvested in the Fish Creek personal use dip net fishery, Upper Yentna River subsistence fish wheel fishery, and by various educational fisheries through permits issued to the villages of Eklutna and Tyonek, the Knik Tribal council, and the Big Lake Cultural Outreach program. The harvest by these fisheries on wild stocks is relatively small when compared to recreational and commercial harvests.

## ECONOMIC VALUE OF SPORT FISHING

Southwick Associates and ADF&G estimated the economic value of sport fishing across the state for 2007 (Southwick Associates, Inc. et al. 2008). Expenditures in the Southcentral region were estimated to be \$988.5 million (Table 18). “Spending” is defined as money spent on goods and services, such as trips, packages, equipment, and real estate, and is assumed to be purchases of equipment and real estate exclusively used for sport fishing. Spending within Southcentral Alaska generated \$386.5 million in income and created 11,535 jobs (Table 18). Colt and Schwoerer (2009), used data from Southwick Associates, Inc. et al. (2008) to estimate the economic value of sport fishing within the Matanuska–Susitna Borough. Matanuska–Susitna Borough values for spending and generated income and jobs were based on 16.5% of the values for Southcentral

Alaska<sup>3</sup>. Total spending within the Matanuska–Susitna Borough was an estimated \$162.8 million (Table 18). Residents spent \$92.4 million, whereas nonresidents spent \$70.4 million on fishing related expenses. Estimates of spending can be considered “high-case” because expenses such as equipment and real estate are assumed to be entirely purchased for fishing (e.g., a fishing cooler or recreational cabin could be used for other purposes besides sport fishing, even if the original intent was for fishing). “Spending” generated \$28.8 million in income for residents and \$34.9 million for nonresidents of the Matanuska–Susitna Borough, creating 852 resident and 1,048 nonresident jobs (Table 18).

## RELATED PROGRAMS

The Recreational Boating and Angler Access Programs provide new access opportunities and upgrade existing angler access in order to increase fishing opportunities in NCIMA fisheries. Proposed, current, and completed access projects as well as detailed stocked lakes access summaries are provided in Appendices E1–E3.

The Information and Education Program (I & E) aims to educate the public on sport fish opportunities and regulations as well as biological aspects such as life histories of fish, fish habitat needs, and ecosystem and watershed awareness. Appendices F1 and F2 summarize the ongoing I & E programs in the NCIMA.

## CHINOOK SALMON FISHERIES

Chinook salmon runs to the NCIMA are made up of many stocks and collectively make up the largest proportion of Cook Inlet drainage stocks. The Susitna River stock is the most numerous in the management area, and the fourth numerous in Alaska, smaller only than the Yukon, Kuskokwim, and Nushagak river stocks (Delaney and Vincent-Lang *Unpublished*<sup>4</sup>). Until recently, estimates of total Chinook salmon runs to the Susitna River have not been available because estimates of escapement were not available. The collective (all Chinook salmon stocks) annual run has long been assumed to number from 100,000 to 200,000 fish (see Delaney and Vincent-Lang *Unpublished*). Susitna River salmon studies, ongoing since 2006, have tracked distributions and estimated abundances of various salmon species; the estimated Susitna River mainstem Chinook salmon run was 45,471 in 2017 and 30,605 in 2018 (Table 19). The estimated Yentna River drainage Chinook salmon run was 17,804 in 2017, and the total (mainstem plus Yentna River) run was 63,275 in 2017. WCI Chinook salmon runs were not part of the estimate. The estimate represents a low run year.

Total harvests of North Cook Inlet (NCI) Chinook salmon for all users varied from about 11,200 to 70,000 from 1893 to 1940 (Table 20), averaging about 38,500 fish annually. This harvest appeared to be sustainable, considering it was maintained for over a half century. Harvests increased from 1940 to 1951, averaging 84,500 fish annually, and peaked at 150,000 in 1951. After 1951, harvests declined precipitously until fisheries were closed in 1963 to allow stocks to rebuild (Figure 11). This history suggests that the maximum sustainable harvest range for NCI Chinook salmon is 38,500–70,000 across most years.

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<sup>3</sup> The fraction 16.5% is derived from the fraction of 295,981 angler-days expended within the Matanuska–Susitna Borough vs. the total number of 1,796,805 angler-days expended within Southcentral Alaska.

<sup>4</sup> Delaney, K. and D. Vincent-Lang. *Unpublished*. Current status and recommendations for the future management of the Chinook salmon stocks of Northern Cook Inlet. A report to the Alaska Board of Fisheries, Anchorage, Alaska, November 1992. Alaska Department of Fish and Game, Division of Sport Fish, Anchorage. Subsequently referred to as Delaney and Vincent-Lang *Unpublished*.

In 1976, Congress passed the Magnuson–Stevens Fishery Conservation and Management Act. This act, also known as the 200-mile limit law, extended federal fishery management authority into waters within 3 to 200 miles of the United States coast. It phased out foreign fishing fleets and implemented fishery management in offshore waters. Its effects on Cook Inlet Chinook salmon stocks are not fully understood; however, it is likely that the act and its associated fishery management plans increased Chinook salmon runs to NCI.

Historically, a variety of users including freshwater and marine sport, commercial, subsistence, personal use, and educational have harvested NCIMA Chinook salmon runs. However, harvest strategies for NCI Chinook salmon have changed substantially since the 1890s. The fishery has slowly evolved from a mixed-stock commercial harvest to a recreationally dominated harvest that targets many discrete substocks. A detailed user history can be found in Whitmore et al. *Unpublished*<sup>5</sup>.

From 1975 through 1990, sport fisheries targeting NCI Chinook salmon runs were gradually expanded to allow harvest of increasing returns (Figure 11). The *Upper Cook Inlet Salmon Management Plan* (5 AAC 21.363), adopted by the BOF in 1977, guided these expansions. This plan, as it relates to NCI Chinook salmon stocks, originally stipulated that stocks normally moving through Upper Cook Inlet to spawning grounds prior to July 1 are to be managed primarily for recreational uses. Therefore, sport fisheries were expanded and currently constitute the largest harvests. In 1986, the BOF adopted the *Northern District King Salmon Management Plan* (5 AAC 21.366) to allocate a portion of the increasing NCI Chinook salmon returns to the commercial fishery. This step-down plan allows for a harvest of up to 12,500 Chinook salmon by a commercial setnet fishery in the Northern District during June.

Under these plans, total harvest of NCI Chinook salmon continued to increase from 1986 to 1993, ranging from about 40,400 to 54,500 fish and averaging about 46,300 fish (calculated from Table 20). Average and peak harvest of NCIMA Chinook salmon in sport fisheries from 1986 to 1993 were about 34,600 and 49,400 fish, respectively (Table 21). Sport harvests decreased substantially to about 16,500 fish in 1995 due in part to fishery closures and restrictions (Appendix B1) placed on sport fisheries following a period of poor escapements observed in the early 1990s. As Chinook salmon stocks rebounded in the mid to late 1990s, fisheries were reopened, and some restrictions were lifted. Beginning in 1997, sport harvests trended upward, peaking at about 33,100 fish in 2000. From 2002 to 2006, harvests were stable, with an average of 27,913 fish harvested. The average total harvest of NCI Chinook salmon by all users was about 32,000 fish during the same time period (Table 21).

In response to development of a sport dominated harvest that targeted a multitude of discrete substocks, biological escapement goals (BEGs<sup>6</sup>) were established in 1993 for 18 NCIMA Chinook salmon spawning streams based on long-term escapement survey data. Escapement goals are intended to ensure the long-term sustainability of NCIMA Chinook salmon stocks. The 1993 BEGs were replaced with sustainable escapement goals (SEGs<sup>7</sup>) as new assessment methods were

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<sup>5</sup> Whitmore, C., D. Sweet, and L. Bartlett. *Unpublished*. Area Management Report for the recreational fisheries of Northern Cook Inlet, 1992. Located at Alaska Department of Fish and Game, Division of Sport Fish, 333 Raspberry Road, Anchorage.

<sup>6</sup> A BEG is the escapement that provides the greatest potential for maximum sustained yield.

<sup>7</sup> An SEG is the level of escapement, indicated by an index or an escapement estimate, that is known to provide for sustained yield over a 5- to 10-year period, used in situations where a BEG cannot be estimated due to the absence of a stock-specific catch estimate.

developed (Bue and Hasbrouck *Unpublished*<sup>8</sup>). Escapement goals were revised during the February 2002 BOF meeting, and again at the 2005 BOF meeting (Hasbrouck and Edmundson 2007) based on the *Policy for the Management of Sustainable Salmon Fisheries* and the *Policy for Statewide Salmon Escapement Goals*, both were adopted by the BOF during winter 2000–2001. Currently there are 17 SEGs for Chinook salmon in the NCIMA (Table 22).

The primary management objective for NCIMA Chinook salmon is to achieve the established escapement goals. Spawning escapement on each of the 17 monitored streams is indexed annually using helicopter surveys or weirs. To provide consistent annual index counts, spawning streams are flown in their entirety from mouth to headwaters (except Little Susitna River) to avoid missing shifts in spawning distribution and in case the survey is not flown during peak spawning. On the Little Susitna River, approximately 40 miles of the lower river is not part of the index count and contains relatively little spawning habitat. Aerial and weir counts paired on the Little Susitna and Deshka rivers during the late 1980s and mid-1990s indicated 40–60% (average 46%) of the actual escapement was counted from the air (Lafferty 1997). Aerial and weir counts compared on the Deshka River for 1995–1997, 1999, 2002, and 2004 showed an average of 45% of the actual escapement counted in the aerial survey (Ivey 2014). A significant linear regression describes the relationship, which has been used to estimate escapement from aerial indices for years of incomplete weir counts and for years prior to the weir program (Ivey 2014). Aerial counts between 2 surveyors, each counting the same stream, were also paired in 1993–1996 on several streams of NCI. Paired aerial counts revealed an average of 93% agreement between surveyors, ranging from 91–98% agreement (Lafferty 1997). This effort was repeated in 2012 with 3 surveyors each flying 6 streams of the ESMU; percent agreement was similarly high between surveyors (S. Ivey, Fishery Biologist, ADF&G, Palmer, personal communication).

To ensure escapement goals are met, fishery managers may reduce potential harvest by reducing daily and seasonal bag limits, prohibiting bait, and reducing time and areas open to fishing. Streams that consistently fall below escapement goals may be closed to Chinook salmon fishing. On streams with weirs or programs that provide inseason sport harvest information, regulations may be liberalized by emergency order (EO) if harvestable surpluses are projected.

From the late 1970s through 1989, escapement goals were achieved. However, beginning in 1990, observed spawning escapements in streams with escapement goals decreased, and in 1992–1995 were well below escapement goals in many streams. In response, actions were taken to reduce harvest levels in 1994 through EOs and BOF regulations. As a result, the combined sport harvest of NCI Chinook salmon from 1995 to 1998 was reduced to approximately half of the 1993 peak harvest (Table 21). Escapement goals were achieved again beginning in 1997 when runs to the area rebounded. Fisheries were subsequently reopened, which contributed in part to increased harvest levels beginning in 1999.

After 1999, escapement goals were mostly met through 2006, and sport harvest levels remained stable through the mid-2000s despite liberalizations to major fisheries. Harvest since 2006 has trended downward, becoming variable in fisheries with recent restrictions that were imposed to address periods of low Chinook salmon production and below average runs. Of 17 Chinook salmon goals in NCI, performance has declined from achieving over 90% prior to 2007 (2002–2006) to about 40% (2007–2010) despite various EOs restricting major sport fisheries. In 2011, the BOF

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<sup>8</sup> Bue, B. G., and J. J. Hasbrouck. *Unpublished*. Escapement goal review of salmon stocks of Upper Cook Inlet. Alaska Department of Fish and Game, Report to the Alaska Board of Fisheries, November 2001 (and February 2002), Anchorage.

made stock of concern (SOC) designations on 6 systems located in the WCI and Susitna River areas. Chuitna, Theodore, and Lewis rivers and Alexander Creek were designated as stocks of management concern, and Willow and Goose creeks were designated as stocks of yield concern. The BOF closed the Chuitna, Theodore, and Lewis rivers and Goose Creek and reduced fishing time within Unit 2 of the Eastside Susitna River Management Unit in an effort to reduce harvest by 50% in that unit (Appendix B1). Only 24% of the NCIMA escapement goals were achieved in 2011 even with these changes in place, and further restrictions to sport and commercial fisheries were necessary to adequately address the areawide downturn (Table 23).

Beginning in 2012, managers began to utilize a strategy that considered both the harvest reductions necessary to achieve escapement goals by management area and the public input from stakeholder meetings. Public meetings early in the downturn of production revealed that a full season of fishing opportunity, even though highly restrictive, was preferred over a less restrictive season that could be interrupted by midseason closures. Midseason closures had caused less predictable fisheries during 2008–2011 and harvesting out of proportion to the run. The goal became to maximize fishing opportunity while conserving stocks and decreasing the potential for midseason closures. Harvest reductions were implemented by EO prior to the start of each season and have varied by area (e.g., Figure 12, Table 24). Harvest reductions needed to achieve the various area escapement goals have been based on the past 2–3 years of harvest and escapement data. In addition, consideration has been given to potential shifts in effort when some areas become more restrictive than other areas. Managing by EO has allowed for management at a finer scale and the greatest potential for maximizing opportunities. In 2012, a target 50% reduction with various restrictions to annual limit, gear, and time was based on low runs in the previous years (2009–2011) for the Susitna and Little Susitna rivers combined (Table 24). Commercial fisheries targeting Chinook salmon in the Northern District were restricted from 12- to 6-hour periods. The 2012 run was lower than anticipated and the Susitna and Little Susitna drainages were closed prior to the end of the regulatory season. Only 24% of the NCIMA escapement goals were achieved in 2012. In 2013, the management strategy was changed to a target 75% reduction, weighing heavily on the outcome of the 2012 season, and 69% of the escapement goals were achieved. Within the sport fishery, the 2013 restrictions resulted in about a 70% harvest reduction from the low run years (2009–2011), when approximately 10,000 Chinook salmon were harvested (Table 24) and about a 90% harvest reduction from the high run years experienced in 1999–2006, when an average of about 29,000 fish were harvested (Table 21). The restrictions developed for the 2013 season resulted in favorable opportunity and achievement of goals, so this set of restrictions was continued through the 2015 season. Only 3 of 15 SEGs were missed in 2015, the least missed since 2006 (Table 23). Prior to the 2016 season, a review of harvest and escapement data from the past 3 years indicated slightly less restrictive EOs could be used for the 2016 season. In 2016, ADF&G targeted approximately 60% harvest reduction with the same EOs as applied during 2013–2015, except 1 more day of harvest per week (Fridays) was allowed on the Little Susitna River, and bait was allowed from the outset of the season on Deshka River. Eight of 14 goals were achieved in 2016 (Table 23); the actual reduction to harvest was 40% (Table 24). The actual harvest reduction was less than targeted in 2015 and 2016 probably because restrictions were relaxed on the Deshka and Little Susitna rivers during these seasons (Table 25). Strategies for managing Chinook salmon during the current period of low production are detailed in the following report sections. Diminished returns since 2007 are probably due to poor marine survival.

## **KNIK ARM MANAGEMENT UNIT CHINOOK SALMON FISHERIES**

### **Fishery Description**

Within the KAMU (Figures 1 and 13), the Little Susitna River is the only stream open to Chinook salmon harvest other than the Eklutna tailrace terminal fishery (see section below). The Little Susitna River supports a major Chinook salmon fishery as well as the largest coho salmon fishery in the NCIMA. Chinook salmon bound for the Little Susitna River are also harvested in marine sport and commercial fisheries, and subsistence and personal use fisheries.

Chinook salmon return to the Little Susitna River from late May through early July; the run peaks around mid-June. Spawning occurs from the Burma Road area upstream into Hatcher Pass, with most spawning taking place upstream of the Parks Highway bridge. There are few Chinook salmon that use tributaries for spawning. Peak spawning typically occurs during the last week of July.

Angler access to the Little Susitna River occurs at 3 primary locations: 1) intertidal waters of the river, which are accessed by boats crossing Knik Arm from the Port of Anchorage public boat launch; 2) the road-accessible Little Susitna Public Use Facility (Burma Road Access), which includes a launch and campground; and 3) private and public launches near the Parks Highway, which provide access to the upper reaches of the river. The Little Susitna Public Use Facility is the most heavily used access to the river. Powerboats can travel on the Little Susitna River from its mouth to the Parks Highway during periods of moderate to high water levels. However, during low flows, travel is restricted to smaller jet boats between river mile (RM) 28 and the Parks Highway at RM 70.

### **Historical Harvest and Escapement**

Information about the fishery and Chinook salmon stock is available from several sources. Inseason sport harvest and fishing effort for Chinook salmon were estimated by onsite creel surveys from 1979 through 1990. Creel survey and SWHS estimates produced comparable results; therefore, the creel survey program was discontinued in 1991. Average annual harvest of Chinook salmon from the Little Susitna River was 1,924 fish from 1977 through 2016 (Figure 14, Table 26). However, harvest has trended downward, averaging 533 from 2012 to 2016 due to diminished returns and restrictions placed on the fishery.

Due to the semiglacial character of the Little Susitna River, the waters were too turbid to do aerial survey counts of Chinook salmon on spawning grounds in 1986, 1989, 1993, 1997, and 1999; surveys were completed during 28 years of the years from 1983 to 2018. The average Chinook salmon escapement index count through 2017 was 1,353 fish, ranging from 3,197 fish counted in 1988 to 558 fish counted in 1984; 530 fish were counted in 2018 (Figure 15, Table 27). The SEG of 900–1,800 fish (starting in 2002) was missed in 2010 and 2011, and 2018 despite restrictions to the sport fishery. During 1988, 1989, 1994, 1995, and 2013 to present, a weir was operated at RM 32.5, with escapement counts ranging from about 2,800 to 7,400 fish (Table 27). Aerial counts during complete count years (1988, 1994, 1995, and 2014–2015) averaged 43% of the actual weir counts. The SEG of 2,300–3,900 fish (starting 2018) was missed as well as the aerial goal.

### **Stocking Program**

To increase road-accessible harvest opportunities and ensure sustainability of the area's wild Chinook salmon populations, SF began a program to stock Chinook salmon at the Eklutna Power Plant tailrace (Figure 16) in 1999. Deception Creek salmon are used as the primary source for

broodstock; however, Ship Creek Chinook salmon are used as broodstock in times of shortfall (Loopstra 2007). There are no wild Chinook salmon returns to the tailrace, although a few hold in the confluence area before traveling to other Knik River streams to spawn. Most fishing takes place in the one-half mile long power plant tailrace from the Old Glenn Highway to the confluence with the Knik River.

The tailrace was first stocked with Chinook salmon smolt in May 2002 (Table 28). A full complement of age classes was realized in 2006. Harvest peaked at 1,084 fish in 2007 before trending downward beginning in 2008. It is speculated that loss of warm water production at the hatchery in 2006 combined with low marine survival has contributed to the small harvests observed since 2007. The newly built William Jack Hernandez Sport Fish Hatchery (WJHSFH) on Ship Creek began producing robust smolt of target size (15.9 g) in 2012, ending a period of cold-water-only rearing (2006–2011). Stronger runs were noted in the Chinook salmon harvest in both 2016 with 1,369 harvested and in 2017 with 551 harvested. Beginning in 2014, target stocking numbers were increased from 150,000 to 400,000 in order to offset poor marine survival and to provide greater harvest opportunity.

### **Fishery Management and Objectives**

The Chinook salmon fishing season for the Little Susitna River is from January 1 through July 13, with fishing permitted from the river's mouth upstream to the Parks Highway, a distance of about 70 miles.

Management of Chinook salmon has undergone changes (Appendix B1). In 2002, an SEG range of 900–1,800 Chinook salmon was set for the Little Susitna River (Bue and Hasbrouck *Unpublished*<sup>8</sup>), replacing the BEG of 850 Chinook salmon that was set in 1993. The SEG is based on the annual aerial index count of spawners.

During 1988, 1989, 1994, and 1995, years with a weir program and when Chinook salmon harvest estimates were available for the Little Susitna River, inriver harvest rates were estimated at approximately 28%, 49%, 59%, and 38%, respectively (comparing Tables 26 and 27). These estimates indicate an increased rate of exploitation from 1988 to 1994 and show that inriver exploitation can exceed 50%. The Chinook salmon weir program ended after 1995 for a period of years. In 1995, in response to poor Chinook salmon returns, the BOF restricted the use of bait and limited the fishery to 6:00 AM–11:00 PM daily. From 1999 to 2008, the aerial index count of the escapements ranged from 1,100 to 2,100 fish and harvest varied from about 2,200 to 3,300 fish (Tables 26 and 27), indicating that the present regulatory framework is maintaining the necessary escapement to ensure a sustainable fishery over most years. Note that the index count is assumed to represent no more than half of the actual escapement.

The weir program for the Little Susitna River was reinstated in 2013 at the RM 32.5 site to provide a tool for inseason management of the fishery during a time of diminished runs. Enough data have been collected from the Chinook salmon weir since 2013 to establish a new weir-based SEG with a range of 2,300–3,900 Chinook salmon. The management objective for the Little Susitna River Chinook salmon fishery is to maximize fishing opportunity while ensuring the attainment of the SEG.



The annual objective for the Eklutna tailrace stocking program is to release 400,000 Chinook smolt, resulting in a return of 4,000 adults and generating 10,000 angler-days of effort<sup>9</sup>. The only other Knik Arm Unit Chinook salmon stream indexed annually is Moose Creek, a tributary of the Matanuska River, but there is no escapement goal or associated fishery.

In the near future, NCI managers will be looking for signs of reduced returns from brood year 2012 due to a 100-year flood, which swept through much of the NCIMA during the last 2 weeks in August 2012. Even though the recent Chinook salmon downturn is a statewide issue and probably marine derived, the flood occurring in 2006 may have contributed to the intensity of area downturns occurring from 2010 to 2012. Similarly, the number of Chinook salmon returning in 2016–2018 as age-4 to age-6 fish could be affected by the 2012 flood.

Beginning in 2012, a management strategy was developed and preseason action taken to reduce harvest up to 50% across the Susitna and Little Susitna drainages (Tables 24 and 25) in an effort to address the Chinook salmon downturn with a variety of restrictions that would spread harvest evenly across the season and provide consistent fishing opportunity throughout the season. A reduction of 50% on the Little Susitna River was based on the 2012 run being similar in size to the 2010 and 2011 runs. The 2010 and 2011 inriver runs were probably similar in size to each other; however, the SEG of 900–1,800 was missed in 2010 by a substantial margin, with action taken too late in the season for meaningful savings. The SEG was narrowly missed in 2011 after the fishery was closed midway through the season to save the remaining 35–40% of the run. The preseason strategy in 2012 restricted harvest to 4 days per week (Friday–Mondays) and allowed catch-and-release fishing on the other 3 days of the week (Tuesdays–Thursdays); the annual limit was reduced from 5 to 2 Chinook salmon over 20 inches and gear restricted to single hook only. The 2012 run was smaller than anticipated and closure of the fishery by June 15 was necessary to achieve the SEG. The result was an 81% reduction in harvest (Table 24). The strategy for 2013 was based on the outcome of the 2012 season and targeted a 75% harvest reduction. The restrictions imposed in 2013 were similar to those in 2012, except Fridays were removed as a harvest day (harvest was allowed Saturdays–Mondays, catch-and-release Tuesdays–Fridays). The SEG was achieved in 2013 (Table 23). The same emergency restrictions were used to manage the fishery through 2015 (Table 25), and the SEG achieved in each year. The weir count was incomplete in 2013 due to flooding that inundated the weir through about 60% of the historical run. Weir counts were used to relax preseason restrictions by June 27 in both 2014 and 2015; the sport fishery was further liberalized in 2015 with the addition of bait on July 6. Weir counts were 3,135 fish in 2014 and 4,902 fish in 2015 (Table 27).

### **Sport Fishery Performance and Escapement in 2017 and 2018**

The Little Susitna River and the Eklutna Tailrace were the only Knik Arm streams open to the harvest of Chinook salmon by regulation. The Little Susitna weir-based goal (2,300–3,900) was achieved in 2017 with 2,531 Chinook salmon passed the weir (Table 27). Throughout the Chinook salmon season, guides and anglers reported fair catch rates. A preseason emergency order issued in March was less restrictive on the Little Susitna River than in 2016. Chinook salmon harvest was allowed 7 days per week and multiple hooks allowed per regulation. The annual limit was 2 from the Little Susitna River. On 24 June, the Little Susitna River was closed to fishing for Chinook

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<sup>9</sup> ADF&G Statewide Stocking Plan, <http://www.adfg.alaska.gov/index.cfm?adfg=fishingsportstockinghatcheries.stockingplan> accessed December 2019.

salmon except on 2 consecutive 3-day weekends. On 1 July, Little Susitna River was closed to fishing for Chinook salmon.

In 2017, the Knik Arm (KAMU) streams produced the second highest sport harvest in the NCI management area (after Westside Susitna) of 902 fish (Table 21). However, the 2017 Little Susitna Chinook salmon harvest of 351 fish was the lowest on record since 1978 (Table 26). Catch rates at the Eklutna Tailrace in 2017 were slower than 2016 and harvest was 551 Chinook salmon, down from 1,369 in 2016 (Table 26).

In 2018, Chinook salmon were assessed by weir and aerial index. Fish were counted throughout the period when the weir was in operation by both staff and video until about 10 June, when the weir became overtopped by high flows, which remained for 22 days. The weir count of 936 fish is considered incomplete. An aerial survey conducted on 23 July counted 530 fish, which was below the aerial SEG range (Table 27). Water visibility was marginal in the lower portion of the index area. Guides and anglers reported only fair catches early in the season. A preseason emergency order was in effect 1 May, similar to the previous 5 years. Harvest was allowed 4 days per week; unbaited, single-hook, artificial lures were allowed; and the annual limit was reduced to 2 Chinook salmon. On 15 June, the Little Susitna River was closed to the retention of Chinook salmon. On 22 June, the Little Susitna River was closed to fishing for Chinook salmon and gear was restricted to 1, single-hook, artificial lure.

Catch rates reported by anglers at the Eklutna Tailrace were reported as only fair through most of the 2018 Chinook salmon fishing season. ADF&G staff observations of fishing at Eklutna Tailrace substantiated the angler reports. During 2017, Chinook salmon harvest in the KAMU accounted for approximately 26% of the total Chinook salmon sport harvest from NCIMA waters (Table 29).

## **EASTSIDE SUSITNA MANAGEMENT UNIT CHINOOK SALMON FISHERIES**

### **Fishery Description**

The ESMU (Figure 1) comprises 3 distinct geographical areas with different regulations: 1) the eastside Susitna River tributaries between the Doshka and Talkeetna rivers (Figure 17); 2) the Talkeetna River drainage (Figure 18); and 3) the upper Susitna River area, which includes the Susitna River and its tributaries between the Talkeetna River and Oshetna River (including the Oshetna River drainage; Figure 19) and all eastside tributaries of the Chulitna River (including the East Fork drainage of the Chulitna River).

#### ***Doshka to Talkeetna Rivers Area***

Tributaries of the Doshka to Talkeetna rivers area (Figures 17 and 18) are numerous and are characterized by their clear water. Most of the fisheries in this portion of the management unit are accessible by road. There are exceptions, including Little Willow and Greys creeks and various Susitna River side sloughs that require a boat to access their most productive portions. The George Parks Highway (Alaska Route 1), which connects Anchorage and Fairbanks, parallels the Susitna River on the east. The Alaska Railroad also parallels the east side of the Susitna River to a large extent. Both transportation systems provide angler access to numerous tributaries. These streams are considered only moderate producers of Chinook salmon and are susceptible to high use. Therefore, regulations are more conservative than in any other areas with respect to time and area. Streams within this area are generally managed as a unit because independent actions taken on one stream can transfer a significant amount of effort to adjacent fisheries.

### ***Talkeetna River***

The Talkeetna River joins the Susitna River about 98 miles upstream from Cook Inlet. This glacial system contains 2 major and numerous minor clear water tributaries that support Chinook salmon (Figure 18). Clear Creek is the most prominent Chinook salmon fishery within the Talkeetna River drainage. The Talkeetna Spur Road provides access to the Talkeetna River; however, a boat is required to reach virtually all Chinook salmon fisheries within the drainage. This area is primarily accessed from the Talkeetna boat launch.

### ***Upper Susitna River Area***

The upper Susitna River area (Talkeetna to Devils Canyon; Figure 19) is accessible only by boat or railroad. A public boat launch adjacent to the community of Talkeetna provides access to the area. Boat travel is relatively safe from the Talkeetna River upstream to the entrance of Devils Canyon, a distance of about 55 miles. Boat travel beyond the entrance to Devils Canyon is extremely hazardous and few boat operators venture past this location. Indian River and Portage Creek are the most prominent Chinook salmon fisheries within the Upper Susitna River Area. The entrance to Devils Canyon, beyond which very few salmon can migrate, is about 150 miles upstream from Cook Inlet.

The Chulitna River empties into the Susitna River a short distance upstream of the Talkeetna River at RM 92. Most tributaries entering the Chulitna River from the east are relatively short, high gradient streams, which receive few spawners. The exception is the East Fork, currently the only Chulitna River tributary supporting a Chinook salmon fishery (Middle Fork, West Fork mouth, and lower Honolulu Creek are included in this fishery).

### **Stocking Program**

The Willow Creek Chinook salmon fishery has been enhanced with hatchery-produced fish since 1985 with the objective of producing a return of an additional 4,000 adult Chinook salmon to Willow Creek and generating 10,000 angler-days of fishing opportunity. This program was largely successful with hatchery fish contributing an average of 40% of the harvest or about 1,400 fish annually through 2005 (Table 30).

The objectives of the Willow Creek enhancement program have not been met in recent years. The future of this program is jeopardized by suppressed returns and that the likelihood of achieving egg take goals and stocking Deception Creek during continued down years is small.

Deception Creek was last stocked in 2018 with 211,000 smolt (Table 31). ADF&G has time and funds invested in these hatchery returns and is obligated to use these fish in stocking other sites if possible. The Deception Creek weir will be operated through 2020 to collect only hatchery produced fish for brood in stocking Eklutna. Naturally produced fish will not be collected and will be allowed to pass the weir.

### **Historical Harvest and Escapement**

Information about the fishery and Chinook salmon stock is available from the SWHS, creel surveys, escapement surveys, and tagging studies. In the Deshka River to Talkeetna River area, most of the Chinook salmon harvest occurs the third and fourth weekends in June because few Chinook salmon arrive at the mouths of eastside Susitna tributaries prior to mid-June. At the Talkeetna River, the fishery peaks the first week in July. The Upper Susitna River fishery has run timing similar to the Talkeetna River.

Tagging studies have shown that Chinook salmon stocks from Willow Creek, the Talkeetna River, Sheep Creek, and Montana Creek are subject to harvest at stream mouths other than their natal stream (Peltz and Sweet 1992). For example, Chinook salmon stocks from the upper portions of the drainage such as Prairie Creek are harvested at stream mouths along their migration corridor. The magnitude of nonnatal stream harvest has not been determined.

Creel surveys were employed from 1979 to 1989 to monitor the effort for and harvest of Chinook salmon and to collect biological samples from catch at Montana Creek and the Talkeetna River. In 1991, 1992, and 1995, creel surveys were conducted for the Talkeetna River. Biological samples were collected from the Talkeetna River during the 1993, 1994, and 1996 seasons. Creel surveys were intermittently conducted at Sheep, Goose, Caswell, Little Willow, Sunshine, and Birch creeks and within the upper Susitna River area. Findings from these surveys are documented in ADF&G annual reports (Watsjold 1980, 1981; Bentz 1982, 1983; Hepler and Bentz 1984; Hepler and Bentz 1985; Hepler and Bentz 1986, 1987; Hepler et al. 1988; Hepler et al. 1989; Sweet and Webster 1990; Sweet et al. 1991; Peltz and Sweet 1992; Peltz and Sweet 1993; Sweet and Peltz 1994; Whitmore et al. 1996; Whitmore et al. 1995; Whitmore and Sweet 1997).

From 1979 to 1993, harvest trended upward from about 1,300 Chinook salmon in 1979 to 22,700 in 1993 in the Eastside Susitna Management Unit (ESMU; Table 32), representing a period of fishery growth. From 1996 to 2002, harvest remained between 10,400 and 17,000 fish. Harvest steadily declined after this period to 2,710 fish in 2011. Below average harvest reflects diminished runs after 2006 and subsequent restrictions placed on the sport fisheries within the ESMU (Table 32, Appendix B1).

Historically, approximately 500–4,000 hatchery fish taken in the Willow Creek sport fishery have contributed to the annual ESMU harvest. Due to disease issues in 2006 and decreased smolt size from 2007 to 2011—the result of cold water rearing at the Fort Richardson Hatchery—fewer numbers than in 2003 and 2004 and poorer quality fish were stocked (Table 31). Additionally, poor marine survival of all Alaskan stocks has resulted in low runs since 2007. Although the ramifications of reduced stocking and poor marine survival are unmeasured, it is speculated that fewer hatchery adults have contributed to this fishery beginning in 2008.

Willow Creek, the Talkeetna River, Montana Creek, and Sheep Creek traditionally produce the largest harvest of Chinook salmon in the ESMU (Table 32). However, due to low returns in recent years, these fisheries, in addition to the rest of ESMU streams, have been restricted to catch-and-release-only fishing opportunity because harvestable surpluses have been negligible. All Parks Highway streams within Unit 2 of the Susitna River were restricted by EO during 2009 to present (Appendix G1).

Aerial survey escapement counts suggest that ESMU stocks compose about 40% of the average Susitna River Chinook salmon escapement from 1979 to 2017 (calculated from Table 33). Prairie Creek, a headwater tributary of the Talkeetna River, has historically received the largest escapements with an average escapement of 2,526 Chinook salmon from 2011 to 2015 (Table 34). Escapements among eastside streams have trended downward since about 2005, but more drastically from 2007 to present following the statewide downturn.

## **Fishery Management and Objectives**

Like management of Chinook salmon in the entire NCIMA, management of Chinook salmon in the ESMU has undergone numerous changes since the 1980s (Appendix B1).

In the Deshka River to Talkeetna River area (Unit 2 or Parks Highway streams; Figure 17), a management strategy with weekend-only fishing has been cautiously developed since sport fisheries reopened in 1979 after a period of closure (Appendix B1). About 10 streams within this area share restrictive regulations due to the potential for high angling effort and close proximity to each other (management actions taken on one stream can easily affect effort and harvest on adjacent streams). By regulation, Unit 2 streams within one-quarter mile of the Susitna River are open to Chinook salmon fishing from January 1 through the third Monday in June and on Saturday, Sunday, and Monday for the next 2 consecutive weeks. For the Willow, Little Willow, Caswell, Kashwitna, Sheep, Goose, and Montana creeks (Figure 17), fishing is allowed from the Susitna River upstream to the Parks Highway. Fishing on Montana Creek extends one-half mile upstream of the Parks Highway Bridge.

By regulation, the Talkeetna River and upper Susitna River drainages are open to Chinook salmon fishing from January 1 through July 13 from 6:00 AM to 11:00 PM. Bag and possession limits are 1 fish per day and 1 in possession. Within the Talkeetna River area, Clear Creek is open upstream to RM 2. Both Larson and Prairie creeks are closed to Chinook salmon fishing. Eastside Chulitna River tributaries are closed to Chinook salmon fishing with the exception of the East Fork Chulitna River and its tributaries. Harvest is allowed within a quarter-mile of the confluence of the East Fork and West Fork of the Chulitna River (including the Middle Fork) and the first quarter-mile of Honolulu Creek under the weekend-only management strategy described for the Deshka to Talkeetna rivers area. During the rest of the week, only catch-and-release fishing is allowed. The portion of the Susitna River above the Talkeetna River is designated as a trophy fishery for rainbow trout; therefore, only unbaited, single-hook artificial lures are permitted as terminal gear.

SEG ranges for 9 ESMU streams were established in 2002 (Table 22) based on historical escapement index counts (Bue and Hasbrouck *Unpublished*<sup>8</sup>). The Deception Creek SEG was removed at the 2005 BOF meeting (Hasbrouck and Edmundson 2007) because Deception Creek is managed as part of Willow Creek. The management objective for these 8 streams is to achieve the escapement goal for each system. In the streams that cross the George Parks Highway, management strategies provide maximum levels of sustained Chinook salmon fishing opportunity while attaining escapement objectives.

Due to the downturn in Chinook salmon runs, which was first recognized in 2007, fisheries have become increasingly restrictive, and since 2009, EOs have been issued in every year. Willow and Goose creeks were designated as stocks of yield concern at the 2011 BOF meeting. The BOF closed Goose Creek and placed additional restrictions on other streams within Unit 2 of the Susitna River in an effort to reduce harvest by 50% and thereby boost escapement levels. The last weekend of fishing, added in 2005, was removed from regulation in addition to only allowing fishing from 6:00 AM to 11:00 PM (Appendix B1). Sheep and Goose creeks share a common channel created in 1971 by a flood that caused a breach in the Sheep Creek channel. Despite efforts to prevent Sheep Creek water flowing into this channel, it persists and is part of the Goose Creek aerial survey index area. Sheep Creek was designated as a “stock of management concern” at the 2014 BOF meeting and Goose and Willow creeks were upgraded to stocks of management concern.

BOF action taken in 2011 to decrease harvest in ESMU streams was insufficient to achieve desired escapement objectives in 2011. Beginning in 2012, preseason action was taken by EO to reduce harvest up to 50% across the Susitna and Little Susitna river drainages based off low run years leading up to 2012. Stocks in the ESMU have not demonstrated the ability to sustain harvest in recent years and angling has been restricted to catch-and-release-only fishing during the times and

area outlined in regulation since 2013. Even harvest of the hatchery stock at Willow Creek has not been possible due mainly to an inability to meet egg-take goals in recent years. Since managed by EO, ESMU streams have alternated between achieving and not achieving the majority of goals each year (Table 23, Figure 20); only 1 out of 8 SEGs were attained in 2017, and zero of 8 SEGs were attained in 2018.

### **Sport Fishery Performance and Escapement in 2017 and 2018**

Management decisions affecting Eastside Susitna streams are based upon postseason aerial surveys over 8 streams, which have established escapement goals. Surveys provide an annual index of abundance. The only information ADF&G has for inseason assessment is from periodic onsite interviews and voluntary reports from guides and fishermen. Preseason restrictions were similar to those in 2013–2016. Only 1 unbaited, single-hook, artificial lure was allowed. Harvest was prohibited, and on 4 July, the Susitna River drainages closed to sport fishing for Chinook salmon (Table 25). Staff surveys of anglers participating in the catch-and-release fisheries during the weekends indicated fishing success to be fair to good. Rainbow trout anglers routinely reported Chinook salmon staging and ascending the lower reaches of streams crossing the Parks Highway. An inseason helicopter survey flown late in June corroborated those reports; however, no inseason changes were made to alter the management strategy, which targeted 100% sport harvest reduction. Aerial index surveys conducted during the last 2 weeks in July (Table 34) showed 1 of 6 counted SEGs were met in the ESMU in 2017; SEGs were missed on Montana and Prairie, Willow, Goose, and Clear creeks (Table 23). Poor water visibility precluded surveys on Sheep, and Chulitna creeks (Table 23).

No Chinook salmon were harvested from the ESMU from 2013 to 2017 (Table 32).

No SEGs were achieved in the ESMU in 2018 (Tables 23 and 34). A preseason emergency order closed all ESMU streams to fishing for Chinook salmon given the potential for the 2018 Susitna River Chinook salmon returns to be less than 2017, in which escapement goals were largely not met. Anglers were only allowed 1 unbaited, single-hook, artificial lure and fishing for Chinook salmon of any size was prohibited in the ESMU. On 22 June, the entire Susitna River drainage including the WSMU was closed to sport fishing for Chinook salmon.

## **WESTSIDE SUSITNA MANAGEMENT UNIT CHINOOK SALMON FISHERIES**

### **Fishery Description**

The WSMU includes all westside drainages of the Chulitna River, all westside drainages of the Susitna River below its confluence with the Chulitna River, and primarily for management purposes, eastside drainages of the Susitna River within a half mile of the Susitna River downstream of Willow Creek. Major tributaries within this unit supporting Chinook salmon fisheries include the glacially-turbid Yentna River, the largest tributary of the Susitna River, which flows into the Susitna River about 30 miles upstream from Cook Inlet; the Deshka River, with its confluence at RM 40 of the Susitna River; and Alexander Creek (confluence at RM 10 of the Susitna River). The Deshka River produces the largest run of Chinook salmon to the NCI area; these fish exhibit early-run timing due to the relative closeness of the Deshka River to the mouth of the Susitna River. Lake Creek (64 miles from the mouth of the Susitna River at RM 34 of the Yentna River) supports the largest Chinook salmon fishery on the Yentna River.

Access to these relatively remote fisheries is primarily by boat or aircraft. Susitna Landing, located at the mouth of the Kashwitna River, and Deshka Landing, located about 4 miles upstream from

the Deshka River, are the principal boat access sites on the Susitna River. A few anglers also gain access to WSMU fisheries by traversing Cook Inlet by boat from the Port of Anchorage. The Petersville Road provides the only vehicular access to this portion of the Susitna River drainage, allowing access to the upper reaches of the Deshka River and Peters Creek.

## **Historical Harvest and Escapement**

Information about the WSMU fisheries and Chinook salmon stock is available from the SWHS, weirs, and escapement surveys. Chinook salmon enter WSMU tributaries in May and June. Harvest at the mouth of the Deshka River peaks during mid-June, and at Lake Creek the peak harvest usually takes place during the third week in June.

The WSMU supported the largest harvests of Chinook salmon within the NCIMA from 1979 to 1991 (Table 29), and again after 2000; ESMU dominated harvests in 1992–1999. Within the unit, the Deshka River, Alexander Creek, and Lake Creek historically supported the largest Chinook salmon fisheries until Alexander Creek was closed to Chinook salmon fishing in 2008 (Table 35). More recently, the Deshka River, Lake Creek, and the Talachulitna River have generated the largest harvests in this unit, about 80% from 2008 to 2012. The Deshka River has historically provided the largest Chinook salmon harvest within the entire NCIMA (compare Table 35 to Tables 21 and 32), except during the mid-1990s when the fishery was closed due to low observed escapements.

Harvest by major WSMU fisheries increased substantially from 1979 to 1993 (Table 35), probably a result of improved access (as described in Whitmore et al. 1994) and increased numbers of anglers. However, liberalized regulations from 1986 to 1992 also contributed to increased harvests.

Escapements have been monitored annually in 6 tributaries using aerial surveys (Table 36). A weir has been used to census escapements to the Deshka River since 1995 (Table 36). From 1991 to 1996, Chinook salmon spawning abundance in WSMU tributaries fell below escapement goals for some years (Table 36). At the Deshka River, Chinook salmon escapement index counts indicated an alarming decline during this period, whereas the average sport harvest of Chinook salmon from 1990 to 1992 was approximately 40% greater than the average harvest during the previous 10 years (Table 35). In response, restrictions were implemented on major WSMU streams and the Deshka River was closed to Chinook salmon fishing from June 17, 1994 to June 21, 1997 (Appendix B2). The escapement goal for the Deshka River of 11,200 Chinook salmon, counted by aerial survey, was not met from 1991 to 1996 (Table 36). Overall harvest dipped to an average of 6,700 fish from 1995 to 1997, then after rebounding in 1998, runs stabilized at about 14,000 fish over the next 10 years and continued through a period of high run years that ended in 2006. Throughout this period, SEGs were met for all streams except Alexander Creek. Alexander Creek escapement counts began a steep downward trend beginning in 2006 (Table 36). The Alexander Creek fishery has been closed since 2008 and has been designated a stock of management concern since 2010. Managers suspect northern pike (*Esox lucius*) have contributed to reduced Chinook salmon productivity in the Alexander Creek drainage, and a large-scale northern pike suppression program is underway (see northern pike section). It is likely that a combination of northern pike predation and poor marine survival are responsible for the low productivity of Alexander Creek Chinook salmon.

Harvest and escapement have dropped sharply since 2006 as a result of low inriver runs and subsequent EOs issued to restrict fisheries (Appendix G1). On the Deshka River, the largest WSMU Chinook salmon fishery, harvest dropped from an average of 7,287 Chinook salmon

harvested 2003–2007 to 1,778 fish harvested 2012–2016 (Table 35). The Deshka River did not achieve the weir-based escapement goal in 2008 and 2009, achieved the goal 2010–2016, and did not achieve the goal in 2017 and 2018 (Table 35).

### **Fishery Management and Objectives**

Management of Chinook salmon in the WSMU has undergone numerous changes since the 1980s, as has management of Chinook salmon in the entire NCIMA (Appendix B1). These changes reflect periods of strong Chinook salmon runs during most of the 1980s and from about 1997 to 2006, surrounding period of weak runs (1991–1996 and 2007–present).

Currently, the bag limit for the WSMU Chinook salmon fisheries is 1 fish daily and 2 in possession. A seasonal limit of 5 Cook Inlet Chinook salmon also applies. Only unbaited, single-hook artificial lures are allowed in large portions of Lake Creek and the Deshka and Talachulitna rivers. Sport fishing guides may not participate or engage in fishing for Chinook salmon while clients are present or within their control.

An escapement monitoring weir at RM 7 of the Deshka River is an important tool for managing Chinook salmon returning to the Susitna River because of large observed escapements and relatively early run timing due the river's closeness to the mouth of the Susitna River. The Deshka River weir operates from mid-May through the duration of the Chinook salmon season to provide managers with timely inseason run information as well as postseason biological data used to assess productivity in this system (Appendices H1–H3). A weir-based SEG range of 13,000–28,000 fish was established for the Deshka River based on actual escapement counts. SEG ranges for 4 other WSMU systems (Lake, Alexander, and Peters creeks, and the Talachulitna River) were also established in 2002 (Table 22). SEGs were based on historical aerial index counts of escapement (Bue and Hasbrouck *Unpublished*<sup>8</sup>). The management objective for these 5 systems is to achieve the escapement goals while providing maximum levels of Chinook salmon fishing opportunity.

A weir has been the cornerstone for inseason management of the Chinook salmon fishery on the Deshka River since its inception in 1995. Over recent years, a preseason outlook of run size to the Deshka River has been used for early inseason management. The preseason outlook uses sibling regression to predict the number of returning age-5 and age-6 fish. It also uses a spawner–recruit relationship combined with the average proportion of age-4 spawners to predict the number of age-4 fish. Harvest is incorporated to estimate total run size. The SWHS is generally used to estimate sport harvest, whereas marine harvest is estimated by taking a proportion of the combined harvests in the Northern District directed commercial setnet, the Tyonek subsistence, and the Kustatan subdistrict commercial setnet fisheries. That proportion is determined from the aerial survey count of the Deshka River Chinook salmon escapement divided by the sum of all aerial Chinook salmon counts in the NCI area. The outlook has limited utility as a management tool because of the variability in precision of the various models used in forecasting the 3 major returning age classes; the outlook has been off by an average of 8,000 fish, mostly over-forecasting runs. It is useful as an index of expected run strength but should not be used alone for making management decisions.

The Deshka River weir has also provided insight into the accuracy of the aerial count. Comparisons of aerial and weir counts for the Deshka River during 1995–1997, 1999, 2002, and 2004 showed an average of 45% of the weir count is counted in the aerial survey (Ivey 2014). A significant linear regression describes the relationship, which has been used to estimate escapement from



aerial indices on years of incomplete weir counts and for years prior to the weir program (Ivey 2014).

Inseason liberalizations to the Deshka River Chinook salmon fishery were common in 2000–2006 (Appendix B2) because the Deshka River escapement exceeded the escapement goal of 17,500 fish from 1999 to 2001 and exceeded or was within the more recent SEG range from 2002 to 2007 (Figure 21). Escapements trended downward after 2007, likely the result of poor marine survival experienced statewide. In 2008, inseason information from the weir indicated a weak run and the fishery was closed by June 19. In 2009, the outlook indicated the low end of the goal would be achieved; however, the outlook had overestimated the forecast of the age-4 component of the run in the past and led to concern over achieving the goal, and therefore preseason action was taken to reduce harvest by restricting harvest to Saturday–Mondays only and not allowing bait. A lower than anticipated run forced a closure of the Deshka River on June 11 at the quarter point of the historical run. The low count in 2009 was due to a record low return of age-5 and age-6 fish rather than a low return of age-4 fish, as projected (R. Yanusz, Fishery Biologist, ADF&G, Division of Sport Fish, Palmer, Alaska, personal communication). The Deshka River goal was missed in 2008 and 2009 (Table 36). The goal was attained 2010–2011 near the midpoint of the goal range (SEG 13,000–28,000) with minimal inseason change.

During 2012, preseason action was taken to reduce harvest up to 50% across the Susitna and Little Susitna drainages because of low run years leading up to 2012. An areawide restriction reduced the annual limit to 2 Chinook salmon over 20 inches and allowed use of only 1, single-hook, artificial lure except in the Deshka River where bait was allowed per regulation. A poorer than anticipated run materialized in 2012 resulting in a midseason closure of the entire Susitna drainage by June 25 (Table 25). In 2013, a 75% reduction was targeted, weighing heavily on the outcome of the 2012 season. In addition to the areawide annual limit and single-hook artificial only restriction imposed by EO during 2012, harvest was restricted to 4 days per week on most Yentna River fisheries (Fridays–Mondays), except for the Talachulitna River, which was restricted to catch-and-release only fishing. A 60% reduction to harvest was targeted for most Yentna River tributaries such as Lake Creek, although a 100% reduction was targeted specifically on the Talachulitna River. Bait was restricted from the outset of the season on the Deshka River. About a 25% reduction to harvest was anticipated for the Deshka River in 2013 (Table 24). The restrictions developed for the 2013 season resulted in a favorable outcome in terms of opportunity and achievement of goals and this set of restrictions was continued through the 2015 season. Only 3 of 15 SEGs were missed in 2015, the least missed since 2006.

Northern pike have probably reduced Chinook salmon productivity in the Alexander Creek drainage through predation on juvenile salmon. Low escapement counts beginning in 2006 resulted in the sport fishery being closed by BOF action in 2008. Currently, an effort is underway to suppress the northern pike population in Alexander Creek through annual gillnetting (see northern pike section). Alexander Creek escapements saw an increase in escapement from 2013 to 2016 (range: 588–1,117 Chinook salmon) compared to 2008–2012, which ranged from only 150 to 343 Chinook salmon (Table 36).

Areawide flooding has been an issue within the past decade. A 100-year flood swept much of the NCIMA during August 2006. This flood would have affected major age classes returning from 2010–2012, further compounding diminished returns thought to have been caused by poor marine survival since 2007. A similar large flood occurred in September 2012; runs occurring from 2016 to 2018 could be affected.

## **Sport Fishery Performance and Escapement in 2017 and 2018**

The sustainable escapement goal (SEG) for the Deshka River of 13,000–28,000 Chinook salmon was not achieved in 2017 with just over 11,350 Chinook salmon through the weir by 27 August (Table 36). Inseason reports from lodge owners, guides, and anglers farther up the Susitna River drainage at Lake Creek and the Talachulitna River also indicated that the Chinook salmon run was weaker than anticipated at the outset of the season. Zero of the 5 SEG goals for the WSMU were achieved in 2017 (Table 23). On 24 March, preseason restrictions for WSMU were similar to those issued in 2013–2016, except the season started per regulation for the Deshka River and restricted harvest was allowed on the Talachulitna River. Only 1 unbaited, single-hook, artificial lure was allowed except for the Deshka River. Harvest of Chinook salmon was prohibited in Unit 1 (except the Deshka River) but allowed in the Yentna River drainage (Unit 4, including the Talachulitna River); harvest was restricted to Fridays–Mondays and catch-and-release was allowed Tuesdays–Thursdays. The annual limit of Chinook salmon was 5 annually but only 2 of which could be from the Yentna River drainage. On 23 June, bait was prohibited on the Deshka River, and on 4 July, the Susitna River drainage was closed to sport fishing for Chinook salmon (Table 25).

Total harvest in for the WSMU in 2017 was 2,550 Chinook salmon, primarily composed of Deshka River (1,392 fish) and Lake Creek (649 fish) harvests (Table 35). The average harvest for the WSMU from 1977 to 2017 is 10,173 Chinook (from Table 35).

The SEG for the Deshka River of 13,000–28,000 Chinook salmon was not achieved in 2018. The final weir count was 8,549 Chinook salmon and the second lowest escapement on record next to the 2008 escapement of 7,533 fish (Table 36). The run was on time, with a midpoint of 20 June. Inseason reports from weir staff and anglers fishing the Deshka River suggested a high proportion of small, young, predominantly male fish, which was in line with the forecast. Reports from lodge owners, guides, and anglers farther up the Susitna River drainage at Lake Creek and the Talachulitna River also indicated that the Chinook salmon run may be as weak as in 2017 when all escapement goals were missed in this area. This information was later substantiated by ADF&G Chinook salmon escapement surveys flown in late July (Table 36). On 1 May, a preseason emergency order closed all WSMU sport fisheries to the harvest of Chinook salmon (catch-and-release only) because escapement goals were not met in 2017 when restricted harvest was allowed to occur over much of the season. Given the potential for the 2018 Susitna River Chinook salmon runs to be less than in 2017, prohibiting retention was expected to provide the greatest potential for achieving escapement goals during 2018 yet continue to provide fishing opportunity. Only 1 unbaited, single-hook, artificial lure was allowed, and harvest was prohibited. On 22 June, the Susitna River drainage was closed to sport fishing for Chinook salmon. None of the escapement goals were achieved in the NCIMA in 2018 (Table 23).

## **WEST COOK INLET MANAGEMENT UNIT CHINOOK SALMON FISHERIES**

### **Fishery Description**

Prior to 2000, the WCIMU extended south from the mouth of the Susitna River to the West Foreland of Cook Inlet (Figure 22). Beginning in 2000, the WCIMU was expanded to include all waters along the west side of Cook Inlet to the latitude of the southern tip of Chisik Island. Streams in the WCIMU, with the exception of the Chakachatna–McArthur and Beluga river drainages are relatively small, clearwater coastal drainages that originate in the Alaska Range, Aleutian Range, or from the slopes of Mount Susitna. The Chakachatna–McArthur and Beluga river drainages are

largely glacial and receive minor use by Chinook salmon anglers. Beginning in 2000, the data in this report reflect harvest, effort, and catch data from the expanded management unit.

Streams south of the West Foreland, namely the Kustatan River and Polly Creek, support small runs of Chinook salmon and generate only a small Chinook salmon harvest (Table 37). Stocks from the WCIMU are also harvested in commercial fisheries, as well as in a subsistence fishery located near the community of Tyonek. The Chuitna and Theodore rivers were the area's most prominent Chinook salmon sport fisheries until they were closed in 2010 due to low returns (Table 38).

Chinook salmon begin to arrive in the area during late May, with the peak of most fisheries occurring during mid to late June.

Access to the coastal fisheries of the WCIMU is by air or water because there is no road link to the Southcentral Alaska highway system. Helicopters are used to access the upper reaches of these streams, and airplanes, combined with the use of land vehicles, provide access to the lower reaches. A road network, built to facilitate oil and gas exploration and the timber industry, does exist in the Tyonek–Beluga area. Several gravel aircraft landing strips are present, and a few roads also serve as runways. The village of Tyonek, with a population of nearly 200, is the area's primary population center.

## **Historical Harvest and Escapement**

In the 1990s, escapement goals were not met for some streams (Figure 23). The reduced abundance of spawning Chinook salmon in WCIMU may have been due to elevated sport harvest and flood-related mortality of eggs and juveniles in 1986. Inspection of the coastal streams after an October 1986 flood revealed substantial streambed scouring and channelization. In association with flooding, there was severe erosion, landslides, and subsequent deposition of earth and debris into the streams. The 1993 escapement index count showed an improvement over the previous 4 years, but the index decreased again in 1994. The 1994–1996 escapement counts for all streams were low. This trend finally reversed in 1997–1999 when all escapement goals were met (Figure 23). Run strength continued to be good through 2005, except that the Theodore River escapement was marginally less than the lower end of the SEG range in 2004 and 2005 (Table 38). All goals were met in 2006. Since 2006, escapements on these 3 streams have trended downward and SEGs have been missed (Figure 23). A spawning escapement survey conducted on the Lewis River on July 17, 2007, counted zero Chinook salmon. Upon investigation, it was found that the river had overflowed its bank about one-half mile below the bridge and was flowing into a large swampy area. After the channel was restored, the river was again surveyed on August 7 to check for evidence of spawning. No Chinook salmon were observed spawning in the Lewis River in 2007. The river overflowed at exactly the same site during another 100-year flood in 2012, resulting in the same actions taken to restore the channel in 2013. About 60 Chinook salmon were counted in 2012 and 60 Chinook salmon counted the following year in the 2013 survey. These fish are believed to have ascended the river during flows high enough to allow passage up the old channel (spring thaw and fall rains typically produce the highest annual flows). Sometime prior to the 2015 season, the river overflowed its bank yet again in the same location, but no further action was been taken to restore the river. Only 5 Chinook salmon were counted in the 2015 survey, and none observed in the 2016–2018 surveys.

Sport angler harvest of Chinook salmon on the Chuitna River was as high as 1,185 fish (1983). However, in 2009, only 109 fish were harvested (Table 37) and in 2010 the Chinook salmon fishery

was closed preseason by emergency order. The fishery was closed by BOF regulatory action prior to the 2011 season and has remained closed since. The average escapement from 1979 to 2007 was 1,937 fish (from Table 38). A more recent average (2013–2017) was 1,332 fish. The sustainable escapement goal (SEG) for Chinook salmon returning to the Chuitna River is 1,200–2,900 fish.

Sport harvest of Chinook salmon from the Theodore River peaked in 1986 at 1,400 fish and decreased to 183 prior to regulatory changes that closed the sport fishery in 1996. In 1999, sport fishing was restricted to catch-and-release. Chinook salmon escapements into the Theodore River have also declined (Figure 23). The average aerial index count from 1979 to 2007 was 1,068 fish (calculated from Table 38). A more recent average (2013–2017) was 261 fish. The SEG for Chinook salmon returning to the Theodore River is 500–1,700 fish. The Theodore River has failed to meet the SEG since 2007 despite being catch-and-release only since 1999 and closed since 2010 (Table 23).

On the Lewis River, sport harvest was greater than 150 fish annually from 1987 to 1990, but the sport fishery was closed by regulation in 1996 and then restricted to catch-and-release by regulation beginning in 1999 (Appendix B1). The average aerial index count from 1979 to 2007 was 533 fish (calculated from Table 38). A more recent average (2013–2017) is 25 fish. The Lewis River SEG for Chinook salmon is 250–800 fish. The Lewis River has jumped its bank several times in the past decade and currently is thought to have only an intermittent connection with Cook Inlet (see above summary of past actions to restore the Lewis River channel).

### **Fishery Management and Objectives**

SEGs for 3 WCIMU streams were established in 2002 (Table 22), based on historical escapement index counts. The management objective for these 3 streams is to achieve the escapement goal while providing maximum levels of sustained Chinook salmon fishing opportunity.

West Cook Inlet Chinook salmon fisheries are open January 1–June 30. The current bag and possession limits are 1 per day and 1 in possession, and a seasonal limit of 5 Cook Inlet Chinook salmon. Only unbaited, single-hook artificial lures are allowed in drainages between the mouth of the Susitna River and the West Foreland. In drainages from the West Foreland to the southern tip of Chisik Island, bait is allowed after May 15. The Chuitna, Theodore, and Lewis rivers were closed by the BOF during the 2011 meeting due to failed escapements over a 4–5 consecutive year period. These systems remain designated as stocks of management concern. The Beluga River drainage was also closed at the 2011 meeting.

A 3-year Chinook salmon weir project was initiated on the Theodore and Lewis rivers in 2012 to assess the effectiveness of the aerial count as an index of the spawning escapement. The Chuitna River was the first choice for a weir program; however, it was found to be unsuitable for a weir and sonar was eliminated as an option because species apportionment would probably impair estimates. The Theodore and Lewis rivers proved to be difficult systems to monitor using resistance board weirs due to fine and loose substrate, combined with frequent flash flooding events that often led to scouring under the rail and loss of complete weir counts (Logelin et al. 2017). The weir versus aerial comparison could only be made one third of the time during the study period; aerial surveys conducted on the Theodore River in 2012 and 2013 indicated 22% and 69% of the actual escapement counted from the air, respectively.

## **Fishery Performance and Escapement in 2017 and 2018**

Only 41 Chinook salmon were reported harvested from the West Cook Inlet area in 2017 (Table 37). The major WCI Chinook salmon fisheries occurring on the Chuitna, Theodore, and Lewis rivers have been closed since 2010, first by EO in 2010 and then by regulation beginning 2011 (Appendix B1). Beluga River drainage streams were also closed in 2011. Aerial index surveys were conducted in late July and no SEGs were achieved on the Chuitna, Theodore, and Lewis rivers (no Chinook salmon were observed on the Lewis River); the Theodore River counts were 21 Chinook salmon in 2017, and only 18 in 2018.(Table 38).

## **COHO SALMON FISHERIES**

### **AREAWIDE OVERVIEW**

#### **Areawide Historical Harvest and Escapement**

Sport harvest of coho salmon in the NCIMA ranged from 17,206 to 105,300 fish from 1977 to 2016 and averaged 59,282 (Table 39). Average sport harvest during 2012–2016 (41,750 fish) and harvest in 2017 (34,657 fish) were both below this long-term average (Table 39). The 2012–2016 average harvest represented 14% of the average coho salmon harvest in the Southcentral region and 7% of the average statewide harvest (Table 39). Within the NCIMA, the KAMU, which includes the Little Susitna River, historically accounts for the largest harvest (approximately 30%) of coho salmon (Table 39). The WCIMU, with fewer accessible streams, had its greatest harvest in 2008.

#### **Areawide Fishery Management and Objectives**

Management of coho salmon in the NCIMA has undergone numerous changes (Appendix B3). Each season, management strategies for NCIMA coho salmon are implemented as the stocks begin entering Cook Inlet and are intercepted, first by the commercial fishery and then the sport fishery.

As coho salmon enter fresh water, ADF&G has limited ability to gauge overall run size. Until 1997, counting weirs at the Little Susitna River and the Deshka River provided the only quantitative measure of coho salmon abundance in the NCIMA. Beginning in 1997, weirs were also operated in Wasilla, Cottonwood, and Fish creeks. Wasilla and Fish creek weirs were discontinued after 2003, and Cottonwood Creek weir was discontinued after 2004. The Fish Creek weir operated through September (the end of the coho salmon season) from 2009 to 2015. Prior to 2009 and during the 2016 season, the weir was removed around August 15, half-way through the historical coho salmon run. Fish wheels on the lower Susitna and Yentna rivers, and foot and aerial index counts for a few streams also contribute information about relative abundance. Within the NCIMA, 8 index areas are surveyed annually by foot: McRoberts and upper Jim creeks (Knik River), Cottonwood and Wasilla creeks (Knik Arm), and Rabideux, Birch, Question, and Answer creeks (Susitna River). Ongoing abundance estimates of coho salmon in the Susitna River drainage should help determine if the Deshka River weir counts provide a reliable index of run strength to the Susitna River drainage. In addition to foot surveys in the fall, low runs and a large sport fishery prompted the development of a weir project on Jim Creek beginning in 2015.

A creel survey to estimate coho salmon harvest and fishing effort was conducted at the Little Susitna River from 1982 through 1993. Intermittent or partial creel survey data have also been collected from other coho salmon fisheries in the area. The SWHS began estimating coho salmon

harvest above and below the weir (RM 32.5) in 2013 to detect any changes in harvest patterns from past harvest estimates.

Poor runs in 1997 and 1999 prompted inseason restrictions to both sport and commercial fisheries. In response to a poor run of coho salmon to Cook Inlet in 1997, emergency orders were issued to close the commercial fishery and to institute an areawide bag limit reduction and bait prohibition for wild stock sport fisheries. Restrictive action was again taken in the commercial fishery in 1998 because of a poor sockeye salmon run. Because of the nature of the multispecies fishery, this action probably resulted in higher escapements. No additional action was required in the sport fishery during 1998 because instream coho salmon abundance seemed to be above the historical average. In 1999, poor runs again resulted in restrictions to the sport and commercial fisheries. Unfortunately, these restrictions were made too late to increase coho salmon escapement. Low escapements of coho salmon to UCI streams prompted the governor of Alaska and users of the coho salmon fishery to submit a request to the BOF to meet out of (its 3-year) cycle and address this conservation problem. The BOF met in February 2000 and significant actions to both the sport and commercial fisheries were taken to reduce the overall harvest of Cook Inlet coho salmon (Appendix B3). Beginning later in 2000 and continuing through 2009, coho salmon runs were mostly above average. From 2010 to 2012, runs across NCI were again below average and considered to be particularly poor in 2011 and 2012. Escapement goals on the Little Susitna River and Jim Creek system were missed in these years despite actions taken to restrict sport fisheries (Appendix B1). In 2011, the BOF made changes to the Central District Drift Plan (Appendix C1) during the last 2 weeks in July in an effort to pass more coho salmon to the Northern District.

There has been growing interest in genetic stock identification (GSI) of coho salmon in Cook Inlet to help determine where northern stocks are harvested both temporally and spatially as they migrate through various fisheries to natal streams (referred to as mixed stock analysis or MSA). In 2013, the state funded a 3-phase study to develop a Cook Inlet coho salmon baseline and apply this baseline to analyze fishery mixtures. By 2016, the genetic baseline contained 84 Cook Inlet coho salmon populations analyzed for 86 genetic markers (Barclay et al. *In prep*). Phase III of this project used the baseline as reported in Barclay et al. (2016) and analyzed samples collected in 2013–2015 from the offshore test fisheries and the commercial fishery (Barclay et al. 2017).

Results showed drift fishery weekly harvests (excluding corridor-only periods) of coho salmon were highest between July 17 and August 7 in 2013–2015. Northern District set gillnet harvests of *Northwest Cook Inlet–Yentna*, *Susitna*, and *Knik* coho salmon decreased after about August 12 in 2013–2015. Patterns of stock-specific coho salmon harvests in the Northern District set gillnet fishery were found to be spatially consistent. In 2013–2015, General Subdistrict (south-Tyonek, Trading Bay, Beluga stat areas) harvests were dominated by *Susitna* and to a lesser extent *Northwest Cook Inlet–Yentna* coho salmon, and General Subdistrict (north–Susitna Flats, Point Mackenzie, Fire Island stat areas) harvests were dominated by *Knik* coho salmon. In 2013–2015, Eastern Subdistrict harvests were dominated by *Turnagain–Northeast Cook Inlet* coho salmon. These patterns indicate that these stocks are generally harvested in relatively close proximity to their natal streams (Barclay et al. 2017).

## **KNIK ARM MANAGEMENT UNIT: LITTLE SUSITNA RIVER COHO SALMON FISHERY**

### **Fishery Description**

Access to the Little Susitna River occurs at 3 primary locations: 1) intertidal waters of the river are accessed by boats crossing Knik Arm from the Port of Anchorage public boat launch; 2) the road-accessible Little Susitna Public Use Facility (Burma Road Access; LSPUF), which includes a launch and campground; and 3) private and public launches near the Parks Highway, which provide access to the upper reaches of the river. The Little Susitna Public Use Facility is the most heavily used access to the river. Powerboats can travel on the Little Susitna River from the mouth of the river to the Parks Highway during periods of moderate to high water levels. However, during low flows, travel is restricted to smaller jet boats between RM 28 and the Parks Highway at RM 70.

Coho salmon return to the Little Susitna River primarily from mid-July through early September. Tagging studies indicate that coho salmon migrate slowly up the Little Susitna River and remain available to the fishery for about 4 weeks, after which they pass the George Parks Highway Bridge into waters closed to fishing for salmon. Spawning takes place from late September through mid-October. Spawning primarily occurs upstream from the George Parks Highway in the mainstem of the river, but some spawning occurs in tributary streams.

### **Stocking Program**

Stocking of coho salmon occurred at the Little Susitna River from 1982 to 1995. Beginning in 1987, returns from smolt releases started to make significant contributions to the sport harvest. The 1995 smolt release in Nancy Lake was the last stocking of hatchery coho salmon for the Little Susitna River. The program was terminated because it was no longer cost-effective to stock the Little Susitna River because of the strength of the natural run and the high cost of hatchery enhancement. A summary of the stocking program can be found in the following reports: Bartlett and Conrad (1988), Bartlett and Vincent-Lang (1989), Bartlett and Sonnichsen (1990), Bartlett and Bingham (1991, 1993), Bartlett (1992, 1994, 1996a–b).

### **Historical Harvest and Escapement**

From 1977 to 2016, harvest of Little Susitna River coho salmon ranged from 1,618 (2012) to 27,610 (1993) fish with an average harvest of 11,024 fish (Table 40). Historically, it has been second only to the Kenai River, which supports the largest freshwater coho salmon harvest in Alaska. However, harvest at Jim Creek surpassed the Little Susitna River from 2006 to 2009.

Prior to 1986, coho salmon escapement to the Little Susitna River was indexed by either ground surveys, aerial surveys, or both when water conditions permitted. Coho salmon escapements have been counted at a weir on the Little Susitna River since 1986 (Table 41). The weir was operated from 1986 to 1995 in the lower river, several miles upstream of the LSPUF. The weir was moved and operated upstream of the Parks Highway bridge at RM 71 from 1996 to 2011. Although most spawning occurs above the upper weir site, the weir was a poor tool for inseason management of the fishery due to a 40-mile separation from the main fishery and about an 18-day difference in run timing between the two sites. The weir was returned to the lower river site at RM 32.5 in 2012, where it continues to be operated.

During 1997 and 1999, the Little Susitna River (Table 41), as well as the whole NCIMA, experienced poor coho salmon runs. However, the stock rebounded by 2001 with a weir count of

30,587 coho salmon. A record escapement of 47,938 coho salmon occurred in 2002. Runs occurring 2009 to 2012 were poor, resulting in failed goals and escapements averaging about 7,600 across these four years (SEG 10,100–17,700). The sport fishery was closed midseason during 2011 and 2012. Average to above-average runs occurred 2013–2015. Flooding during the last quarter of the run in 2013 probably contributed to below-average harvest and an incomplete count of 13,583 fish. The count of 12,756 fish in 2015 was also considered incomplete due to the weir being pulled after the goal was achieved due to budget constraints. The projected escapement on the day the weir was pulled was about 14,000 fish or mid-SEG range.

Harvest estimates from the SWHS and escapement data indicate that coho salmon abundance at the Little Susitna River fluctuates widely. Inriver runs (escapement plus sport harvest) ranged from approximately 7,000 to 67,000 fish from 1996 to 2015 (Tables 40 and 41); years after the stocking program ended and for which complete escapement counts are available. Average inriver exploitation has varied with escapement over the same time period and averaged 43% (Figure 24).

### **Fishery Management and Objectives**

Currently the bag and possession limits are 2 coho salmon 16 inches or more in total length per day and in possession. Only unbaited, artificial lures are allowed in the Little Susitna River from October 1 through August 5. This regulation was originally designed to reduce the catch rate of early arriving nonhatchery fish and now remains in effect to reduce hook-and-release mortality of ocean-fresh coho salmon entering the lower river during the first quarter of the run. Hook-and-release mortality of coho caught within the estuary using bait was found to approximate 70% in a 1993 study designed to simulate fishing practices at the time (Vincent-Lang et al. 1993). Today, in addition to a delay in bait use until later in the season, 2 other measures have been adopted to help reduce hook-and-release mortality: 1) anglers are required to quit fishing when they reach their bag limit of Little Susitna River coho salmon, and 2) coho salmon intended for release cannot be removed from the water.

Coho salmon runs on the Little Susitna River have been found to be significantly correlated with those of other Knik Arm streams (T. Namtvedt and R. Yanusz, Division of Sport Fish Biologists, Palmer, Alaska, personal communication). The weir at its present location at RM 32.5 provides timely data to manage the sport fishery

### **Fishery Performance and Escapement in 2017 and 2018**

The 2017 the SEG of 10,100–17,700 for the Little Susitna River was met with a count of 17,781 coho salmon (Table 41). Angler and guide reports of fishing success on the Little Susitna River ranged from fair to good early in the season, to good to very good late in the season. In general, a very late and above-average run was experienced in the Knik Arm fisheries. Harvest of coho salmon on the Little Susitna River in 2017 was 3,068 fish (Table 40). This was below the 2012–2016 average of 5,402 fish (Table 40).

The 2018 run of coho salmon to the Little Susitna River was considered an incomplete count with 7,583 fish over the weir (Table 41). The weir was flooded as of 7 August at the first quartile of the historical run. The flooding lasted the rest of the season. Based on inseason reports of excellent fishing, it is likely the SEG would have been attained or even exceeded. On 8 August, the Little Susitna River bag limit was increased to 3 per day and in possession.



## **KNIK ARM MANAGEMENT UNIT: OTHER COHO SALMON FISHERIES**

### **Fishery Description**

The Knik Arm Management Unit (Figures 1 and 13) presently supports 5 significant sport fisheries for coho salmon in addition to the Little Susitna River: Fish Creek, Cottonwood Creek, Wasilla Creek, Jim Creek, and Eklutna Tailrace. This unit also has a personal use dip net fishery on Fish Creek, and 3 educational permit fisheries (Knik Tribal Council, Eklutna Village, and Big Lake Cultural Outreach).

Jim Creek enters the glacial Knik River about 10 river miles from salt water. Most sport fishing occurs at the confluence of Jim Creek and the Knik River, an area locally known as the Jim Creek Flats. Fishing effort and harvest rates in the Jim Creek Flats area are strongly influenced by the Knik River because its glacial waters can inundate the entire area. Powered and nonpowered boats can access upstream reaches of Jim Creek either from the Knik River or by launch into Mud Lake or a short portage from Jim Lake into lower McRoberts Creek, a tributary to Jim Creek.

Fish, Cottonwood, and Wasilla creeks (Figure 13) are restricted primarily to intertidal fisheries and have been open to salmon fishing on weekends only (Saturday and Sunday) since 1971 because harvestable surpluses cannot normally accommodate continuous daily exploitation. Time restrictions were added in February 1999 after poor runs during 1997 and 1999 (Appendix B3). Motorboats are not permitted on Wasilla Creek during weekends from July 15 through August 15.

Coho salmon return to Knik Arm fisheries from late July through August. Spawning occurs from late September through mid-October. The average weight of Knik Arm coho salmon, excluding those of Little Susitna River origin, is less than 6 pounds.

### **Stocking Program**

The sport fishery at the Eklutna Power Plant tailrace (Figure 16) was originally supported by coho salmon returning to the Cook Inlet Aquaculture Association's (CIAA) hatchery located at the head of the tailrace. The nonprofit Eklutna Hatchery operated from 1981 to 1998. Presently, fish reared at the ADF&G William Jack Hernandez Sport Fish Hatchery support the fishery, which is confined to the half-mile-long tailrace and all waters within a half-mile radius of its confluence with the Knik River, and to an ADF&G marker located 2 miles downstream of the confluence. Sport anglers harvest stocked coho salmon and a few wild sockeye and chum salmon in the tailrace during the coho salmon run. Salmon of the Knik River and Matanuska River drainage origin are also harvested at the confluence of the tailrace and the Knik River. Current objectives of the Eklutna stocking program are to stock 120,000 thermally-marked coho salmon annually to produce a return of 7,500 adult coho salmon and generate 6,000 angler-days of effort (Loopstra and Hansen. 2015).

Coho salmon have been periodically stocked into other KAMU systems. Stocking of Fish and Cottonwood creeks was initiated during the late 1970s and at Jim and Wasilla creeks in the late 1980s (Whitmore et al. 1994–1996; Whitmore and Sweet 1997–1999; Rutz and Sweet 2000; Sweet and Rutz 2001; Sweet et al. 2003, 2004). Contribution of hatchery fish to the catch and harvest in the sport fisheries was not evaluated.

### **Historical Harvest and Escapement**

From 1987 to 1998, Knik Arm stocks were harvested by a set gillnet commercial fishery that operated near the mouth of Fish Creek. Coho salmon harvests averaged 2,900 annually during this period (Whitmore et al. 1996; Whitmore and Sweet 1997–1999). BOF action closed the Knik Arm

commercial set gillnet fishery beginning in 1999 to allow higher coho and sockeye salmon escapements into Knik Arm streams. The total annual harvest for the 6 sport fisheries (Fish, Cottonwood, Wasilla, and Jim creeks, the Little Susitna, and Eklutna Tailrace) averaged 11,983 coho salmon from 2012 to 2016, down from the 1977–2016 mean of 22,151 fish (Table 40). Until 2006, the Little Susitna River was the largest Knik Arm sport fishery in terms of both participation and coho salmon harvest (Table 40, Figure 24). Jim Creek harvest rates have been higher than the Little Susitna River harvest rates during 2006–2009 and 2011–2012, but effort (angler-days) was slightly less (Table 40). Jim Creek escapement was monitored by a weir from 1993 to 1994. A weir program was again initiated in 2015 and continues today, to assess inriver harvest rates and run strength for inseason management of the sport fishery.

An index survey is conducted on McRoberts and Upper Jim Creek in late September (Table 42). Escapement index surveys have also been conducted on 4 Knik Arm streams: Cottonwood, Wasilla, and Spring creeks (Tables 41). Coho salmon escapement on Fish Creek has been monitored historically by weir, except from 1994–1996 and 2004–2008, 2011, and 2016, when the weir was removed prior to August 15 and before the majority of the run (Table 41).

### **Fishery Management and Objectives**

Historical escapement data are available for Fish, Cottonwood, and Wasilla creeks from weirs operated on each creek in the past from about 20 July through 25 September and foot index counts conducted annually on Cottonwood and Wasilla creeks. For Jim Creek, foot surveys are conducted on McRoberts Creek, a tributary of Jim Creek, and upper Jim Creek; the counts are summed to provide a total Jim Creek escapement index. However, only the McRoberts Creek counts are used in the escapement goal. The management objective for all Knik Arm streams, including the Little Susitna River (previous section) is to provide sustainable harvest opportunity while achieving the escapement goals on the Little Susitna River, Fish Creek, and Jim Creek. Coho salmon weir counts on Wasilla, Cottonwood, and Fish creeks and the Little Susitna River have been found to be significantly correlated (T. Namtvedt and R. Yanusz, Fisheries Biologists, ADF&G, Palmer, personal communication). Fish Creek weir counts are used for inseason management of Fish Creek as well as Wasilla and Cottonwood creeks where weirs are not currently operated. The Little Susitna weir located at RM 32.5 is a useful tool for timely inseason management of the coho salmon fishery.

The BOF reduced the bag and possession limits for all Knik Arm fisheries in 2000, excluding the stocked coho fishery at the Eklutna Tailrace, to 2 coho salmon 16 inches or more in total length in response to poor runs occurring in 1997 and 1999 (Appendix B3). Jim Lake, McRoberts Creek, and upper Jim Creek, tributaries supporting large spawning populations in the Jim Creek drainage, were closed to salmon fishing in 2000; Mud and Leaf lakes of the Jim Creek system joined the list of closed waters in 2014.

Between 2002 and 2009, effort and harvest more than doubled from previous levels on Jim Creek (Table 40). The SEG was missed during 2010–2012, 2014, and 2016 (Table 42). To reduce harvest closer to historical levels, the BOF modified regulations at the 2014 and 2017 meetings to reduce fishing time on Jim Creek by allowing sport fishing to occur on Wednesdays through Sundays only beginning August 1 and limiting fishing hours to only 5:00 AM–10:00 PM after August 1.

## **Fishery Performance and Escapement in 2017 and 2018**

Total sport harvest of coho salmon in Knik Arm streams was 6,232 fish in 2017; the 2012–2016 average was 11,983 fish (Table 39). Fishing success on the weekend-only fisheries of Cottonwood, Fish, and Wasilla creeks was fair later in August. The Eklutna Tailrace harvest of 913 fish was about half the average harvest for the previous 5-year period of 1,859 coho salmon (Table 40).

In 2017, weirs were operated on the Little Susitna River, Fish Creek, and Jim Creek. The SEG of 10,100–17,700 on the Little Susitna River was exceeded with a count of 17,781 coho salmon (Table 41). The Fish Creek SEG of 1,200–4,300 was exceeded with a count of 8,966 coho salmon (Table 41). The SEG for Jim Creek of 450–1,400 fish is assessed after the fishing season by a foot survey on McRoberts Creek, a small spawning tributary within the Jim Creek System. The foot survey of 607 coho salmon met the escapement goal (Table 42 and Figure 25). Angler and guide reports of fishing success on the Little Susitna River ranged from fair to good early in the season, to good to very good late in the season. In general, a very late and above average run was experienced in the Knik Arm. Fisheries on Fish, Cottonwood, and Wasilla creeks were liberalized after 22 August. Foot counts were also conducted on Cottonwood and Wasilla creeks in late September, however, there are no goals on these creeks.

In 2018, weirs were operated on the Little Susitna River, Fish Creek, and Jim Creek. The SEG on the Little Susitna River is 10,100–17,700 fish. About 7,600 coho salmon were counted through the Little Susitna weir before the weir was flooded on 7 August at the first quartile of the historical run (Table 41). The flooding lasted the rest of the season and the count was considered incomplete. Based on inseason reports of excellent fishing, it is likely the SEG would have been attained or even exceeded. The Fish Creek SEG of 1,200–4,400 coho salmon was exceeded on 26 August. The SEG for Jim Creek of 450–1,400 coho salmon was met with 758 coho salmon based on a foot survey of McRoberts Creek. In general, a strong run of coho salmon was experienced in most areas of the Knik Arm.

## **EASTSIDE SUSITNA AND WESTSIDE SUSITNA MANAGEMENT UNITS COHO SALMON FISHERIES**

### **Fishery Description**

A description of these management units, including access, is presented in the Chinook salmon section of this report. The Susitna River drainage supports the largest coho salmon stock within the NCIMA and the entire Upper Cook Inlet area. Coho salmon returning to the Susitna River units are early-run stocks that begin to enter these drainages about mid-July. The migration into the Yentna River drainage (RM 28 of the Susitna River, WSMU) normally peaks the last week in July, whereas the peak passage into the Talkeetna River (RM 98 of the Susitna River, ESMU) takes place 7 to 10 days later. Few coho salmon enter the Susitna River after early September. Most spawning occurs between mid-September and mid-October.

All Eastside Susitna Management Unit tributaries provide fishing opportunities for coho salmon. The Deshka River and Lake Creek are the major WSMU coho salmon fisheries. Fish Lakes Creek and the Talachulitna River provide modest harvests, whereas the Alexander Creek fishery has diminished, possibly a result of northern pike predation on juvenile coho salmon.

## Historical Harvest and Escapement

Coho salmon harvests averaged 10,812 fish in the ESMU and 10,732 fish in the WSMU from 2012 to 2016 (Table 39). The contribution from the ESMU and WSMU to the average total NCIMA coho salmon harvest during 2012–2016 was 26% for each, respectively.

From 2012 to 2016, Talkeetna River, Willow Creek, and Montana Creek produced the largest coho salmon harvests in the ESMU, averaging 2,303, 1,575, and 1,395 fish, respectively, and accounting for approximately 51% of the Eastside Susitna harvest (Table 43). During that period, in the WSMU, coho salmon harvest averaged 3,582 fish from Lake Creek, 2,073 fish from the Deshka River, and 2,071 fish from the Yentna River (Table 44).

Side-scan sonar and fish wheels have been used to estimate coho salmon abundance in the Yentna River from 1981 to 2008 (Westerman and Willette 2010). The Yentna River sonar program was designed to estimate sockeye salmon escapement utilizing sonar counters and fish wheels on opposite banks. Coho salmon were also counted, though factors such as the offshore distribution of upstream migrating coho salmon affect the accuracy of the counts. Estimates of coho salmon were considered index counts only (Tarbox et al. 1983; Davis and King 1997).

Coho salmon have been counted through a weir on the Deshka River since 1995. The weir was operated at RM 17 from 1995 to 1996 and at RM 7 from 1997 to present (Oslund et al. 2017; Appendices H1–H3). During 1996, the weir was operational only through July 30, after which high water made counting fish impossible. Incomplete counts were also recorded in 1998–1999 and 2002, 2006, and 2011–2013 due to high water events (Ivey 2014). Estimating escapement during incomplete count years is nearly impossible because run timing for Deshka River coho salmon is highly variable (Ivey 2014). Average Deshka River escapement from 2013 to 2017 at RM 7 was 19,741 coho salmon (Table 45). The 10-year average escapement from 2008 to 2017 was 14,636 coho salmon. A peak escapement of 62,940 coho salmon occurred in 2004. The weir continues to be operated at this site annually.

## Fishery Management and Objectives

Coho salmon sport fishing is permitted throughout the year at most sites in the ESMU and WSMU. However, portions of several ESMU fisheries are closed to salmon fishing to protect spawning fish. Closed areas usually include upper reaches of tributaries that are road accessible.

Flowing waters of major tributaries or portions of tributaries within the Susitna River drainage are restricted to unbaited, single-hook artificial lures throughout the year. These regulations are implemented as part of special management regulations for rainbow trout under the statewide management standards for wild trout (5 AAC 75.220) and in part under current Chinook salmon management strategies (Appendix C1). Only unbaited artificial lures may be used from September 1 through May 15 in all flowing waters of the Susitna River drainage. Additionally, except in the Deshka River, bait is prohibited from May 15 through July 13 in waters open to Chinook salmon fishing. Exceptions have been made for fishing burbot (*Lota lota*) when legal burbot fishing gear is used.

The BOF reduced the bag and possession limits for all Susitna River fisheries in 2000 to 2 coho salmon 16 inches or more in total length in response to poor runs occurring in 1997 and 1999 (Appendix B3). Runs to the Susitna River rebounded in 2000 resulting in a relaxation of restrictions in following years. Bag and possession limits were increased in the WSMU at the January 2005 BOF meeting to 3 fish 16 inches or more in total length and 6 in possession, except

in Alexander Creek where the 2 fish bag and possession limits were retained. The bag and possession limits were increased to 3 per day and in possession in the Talkeetna, Chulitna, and upper Susitna River areas (Units 3, 5, and 6) during the 2011 BOF meeting. The bag and possession limits for coho salmon remain at 2 fish along Parks Highway streams of Unit 2 within the ESMU.

Besides the Deshka River weir where actual escapement is counted, 4 other small streams are indexed on an annual basis: Rabideux, Birch, Question, and Answer creeks (Table 45). There are no SEGs within the ESMU and WSMU. The sport fishery is currently managed under conservative regulations meant to ensure sustainable harvest over the long term because inriver exploitation is relatively low.

Ongoing abundance estimates of coho salmon in the Susitna River drainage should help determine if Deshka River weir counts provide a reliable index of run strength to the Susitna River drainage.

### **Sport Fishery Performance and Escapement in 2017 and 2018**

The SEG for the Deshka River of 10,200–24,100 coho salmon was exceeded in 2017 with just over 36,000 coho salmon through the weir by 27 August. Inseason reports from guides and anglers on the Deshka River, Eastside Susitna streams, and up the Yentna River drainage at Lake Creek and the Talachulitna River indicated very good to excellent fishing at times. Weir counts and angler reports indicated coho salmon to be up to 2 weeks late entering area streams. In general, a very late and very strong run of coho salmon was experienced on the Susitna River drainage. Fisheries were liberalized after 22 August.

Coho salmon sport harvest in the ESMU in 2017 was an estimated 12,838 fish (Table 43). The 2012–2016 mean was 10,812 coho salmon. A harvest of 10,759 fish in the WSMU was comparable to the 2012–2016 mean of 10,732 (Table 44).

The SEG for the Deshka River of 10,200–24,100 coho salmon was met on 12 August 2018 with a season total of 12,962 fish (Table 45). Fishing reports were favorable on the Deshka River during the first 2 weeks of August during a period of strong daily weir counts.

Inseason reports from guides and anglers on Eastside Susitna streams and up the Yentna River drainage to Lake Creek indicated very good to excellent fishing at times in 2018. Reports of large fish were common. Angler reports and weir counts indicated coho salmon to be on time to several days early. In general, a strong run of coho salmon was experienced on the Susitna River drainage. Fisheries were liberalized 14 August 2018.

Escapement index count totals on the Eastside Susitna streams of Rabideux, Birch, Question, and Answer creeks was 671 coho and above the 2013–2017 average of 445 coho (Table 45).

## **WEST COOK INLET MANAGEMENT UNIT COHO SALMON FISHERIES**

### **Fishery Description**

A description of this management unit, including access, is presented in the Chinook salmon section of this report. Little information is available regarding run timing of West Cook Inlet Management Unit coho salmon. However, it is assumed to be similar to run timing in the Susitna River. The Chulitna and Theodore rivers provide major fisheries north of the West Foreland, and the Kustatan River and tributaries of Big River Lakes provide major fishery sites south of the West Foreland.

## **Historical Harvest and Escapement**

Coho salmon harvests averaged 8,342 fish in the WCIMU from 2012 to 2016 (Table 39). The unit's contribution to the total NCIMA was 20% during this period. Between 2002 and 2003, harvest of coho salmon in the tributaries of Big River Lakes increased by a magnitude of about 4. Harvest in this system from 2012 to 2016 averaged 1,286 fish (Table 46). This system is now comparable to the Kustatan in coho salmon harvest (Table 46). The primary producer of coho salmon in this unit is the Kustatan River with a 2012–2016 average sport harvest of 2,488 fish (Table 46). An average of 377 coho salmon were harvested in the Chuitna River and 474 in the Theodore River from 2012 to 2016. Tributaries of the Beluga River drainage, such as Coal Creek and Pretty, Olsen, and Scarp creeks produced 430 coho salmon during this same time period (Table 46).

## **Fishery Management and Objectives**

Regulatory history of WCIMU is found in Appendix B3. In the WCIMU, all flowing waters are closed to salmon fishing October 1 to December 31. The bag and possession limits for coho salmon are 3 per day and 6 in possession. South of the West Foreland the limit is 3 per day and 6 in possession. There are no coho salmon goals for the WCIMU.

## **Sport Fishery Performance and Escapement in 2017 and 2018**

Coho salmon escapement is not monitored on WCI area streams and ADF&G must rely on trends in harvest and effort taken from the Statewide Harvest Survey and reports from anglers and guides when assessing these stocks. Similar to the Susitna River, reports from anglers and guides were of a late and very strong run of coho salmon to streams supporting popular sport fisheries.

The 2017 sport harvest of coho salmon from WCIMU was an estimated 4,828 fish (Table 46), below the 2012–2016 average of 7,602 fish. The largest harvest of coho salmon came from the Kustatan River with an estimated harvest of 1,540 fish, below an average of 2,488 from 2012 to 2016 (Table 46). A harvest of 1,720 fish at Big River Lakes was above average.

No management actions were implemented during the 2018 sport fishery. This fishery performed very similar as the Susitna River from reports from anglers and guides. They indicated a strong run of coho salmon to popular fisheries such as the Kustatan River and Big River Lakes.

# **SOCKEYE SALMON FISHERIES**

## **FISHERY DESCRIPTION**

The Yentna River is thought to support about 77% of the Susitna River sockeye salmon escapement (Fair et al. 2009). The sport fishery for sockeye salmon in NCIMA drainages is mostly incidental to harvest of other salmon. Big River Lakes has been a growing sockeye salmon sport fishery in the WCIMU, and in recent years is one of the largest fisheries in the NCIMA. The majority of the harvest in this fly-fishing-only fishery occurs at the mouth of Wolverine Creek, which drains into Big River Lakes. Other directed sockeye salmon fisheries occur in the Susitna River drainage at Larson Creek (Talkeetna River drainage) in the ESMU; Lake Creek, and the Yentna and Talachulitna rivers in the WSMU; the mouth of Nancy Lake Creek (Little Susitna River drainage); and at Jim Creek in the KAMU. Any surpluses of sockeye salmon above escapement needs at Fish Creek of the KAMU are targeted by a personal use fishery (see Personal Use and Subsistence Fisheries section).

## **STOCKING PROGRAM**

Due to declining abundance of sockeye salmon during the early 1970s, stocking of Fish Creek with sockeye salmon was initiated in 1975. See Personal Use and Subsistence Fisheries section for further information.

## **HISTORICAL HARVEST AND ESCAPEMENT**

Sport harvests of sockeye salmon in the NCIMA ranged from 3,140 to 23,235 fish during 1977 to 2017 and averaged 13,936 fish (Table 47). Within the NCIMA, the KAMU and ESMU historically accounted for the majority of the harvest of sockeye salmon. The WCIMU, with fewer accessible streams, placed last in average harvest until about 1993, when the sport fishery at Wolverine Creek (Big River Lakes) began to grow. Wolverine Creek is located in Redoubt Bay Critical Habitat Area and has developed into a popular sockeye salmon fly-fishing and bear viewing area since the early 1980s. Most recently, harvest in NCIMA has been greatest for sockeye salmon in WCIMU due to the growth in this fishery (Tables 47 and 48). The Knik River dominates KAMU harvests (Table 49), the ESMU harvests are predominately from the Talkeetna River, specifically Larson Creek (Table 50), and Lake Creek is the largest fishery in the WSMU (Table 51).

Sockeye salmon populations are present in numerous streams throughout the NCIMA, some of which were surveyed for escapement sporadically in the past (Tables 52 and 53). Bodenburg Creek, a Knik River tributary, was surveyed annually from 1968 to 2018, except for 1984 and 1988 (Table 54).

The escapement of sockeye salmon into the Fish Creek drainage has been extensively documented. Escapement of these late-run sockeye salmon ranged from 2,705 fish in 1973 to 307,000 fish in 1940 (Kyle and Chlupach 1990). From 1969 to 2017, escapement of sockeye salmon ranged from 2,700 fish in 1973 to 192,400 fish in 1984 and averaged 62,950 fish (Table 52).

Escapement of sockeye salmon to the Yentna River drainage was documented annually from 1981 to 2008 by the Division of Commercial Fisheries and at various times by CIAA operating weirs at Chelatna Lake (Lake Creek drainage), Judd Lake (Talachulitna drainage), Larson Lake (Talkeetna River drainage), Shell Lake, and Hewitt Lake (Tables 52 and 53). Within the NCIMA, Division of Commercial Fisheries has also operated a weir at Packers Creek on Kalgin Island. A major effort to better understand the dynamics surrounding sockeye salmon production in the Susitna River was conducted from 2006 to 2008 by the Division of Sport Fish. Abundance estimates were generated using a combination of fish wheels and weirs, and the distribution of spawners was assessed. The abundance of mainstem Susitna River sockeye salmon was estimated at 107,000 (Table 19) fish in 2006 using PIT tags deployed at a site called “Flathorn” and recovered at a site called “Sunshine” (Yanusz et al. 2007). Neither the estimate based on PIT tags nor the estimates based on radio tags met conditions for a reliable capture–recapture experiment for the Yentna River during 2006. Sockeye salmon abundance estimates for the mainstem Susitna River were 87,883 in 2007 and 70,552 in 2008. In the Yentna River, estimates were 239,849 in 2007 and 288,988 in 2008, based on radio tags (Table 19; Fair et al. 2009).

## **FISHERY MANAGEMENT AND OBJECTIVES**

Regulations for sockeye salmon sport fisheries of the NCIMA follow general regulations for salmon other than Chinook salmon over 16 inches in total length. The bag and possession limits on WSMU and WCIMU tributaries are 3 per day and 6 in possession; ESMU and KAMU

tributaries are limited to 3 per day and 3 in possession. Wolverine Creek within a 500-yard radius of its mouth is managed as the area's only fly-fishing-only waters during June 1–July 31.

The management objective for sockeye salmon in the NCIMA sport fisheries is to attain established escapement goals as measured at various weirs and a sonar site while harvesting fish in excess of these escapement goals. The SEG for Fish Creek is 15,000–45,000 sockeye salmon counted through a weir. Yentna River sockeye salmon were estimated by side-scan sonar located at RM 4 of the Yentna River through 2008 and evaluated against an SEG of 90,000–160,000 fish. Under the *Northern District Salmon Management Plan*, when runs were greater than 4,000,000 sockeye salmon to the Kenai River, an OEG of 75,000–180,000 fish became the escapement goal. The Yentna SEG and OEG were discontinued after 2008 and replaced with 3 weir-based SEGs: Chelatna Lake (SEG 20,000–65,000), Judd Lake (SEG 25,000–55,000), and Larson Lake (15,000–50,000).

From 2004 to 2007, sockeye salmon sport fisheries occurring on the Susitna River were restricted through various emergency orders (EOs) prohibiting retention. The EOs were based on low inseason escapement estimates generated at the Yentna River sonar and additionally in 2006, on a low preseason projection of 190,000 sockeye salmon returning to Susitna River.

A project to estimate abundance and spawning distribution on the Susitna River drainage was conducted 2006–2008 (Table 19). Part of this project was directed at establishment of a genetic baseline for Susitna sockeye salmon. Microsatellite and single nucleotide polymorphisms (SNPs) technology were used to further ADF&G's understanding of stock identification and the exploitation of Susitna origin sockeye salmon among various fisheries. Proportions and numbers of Susitna-origin sockeye salmon harvested in these fisheries from 2005 to 2009 may be found in Barclay et al. (2010).

Following guidelines set forth in the *Policy for Management of Sustainable Salmon Fisheries* for the State of Alaska<sup>10</sup>, the BOF designated Susitna River sockeye salmon a stock of yield concern in 2008 based on a failure to achieve the Yentna River SEG in 5 of the previous 8 years and lower than expected yields<sup>11</sup>. An action plan ensued, directing management of the Central District drift gillnet fishery to continue under restrictive guidelines set forth in the plan, and a restrictive measure within the *Northern District Salmon Management Plan* was implemented that limits fishing to one-third of the normally allotted gear (1 set gillnet not more than 35 fathoms in length) from July 20 to August 7. In late 2008, a sockeye salmon escapement goal review was conducted out of the BOF 3-year cycle (Fair et al. 2009) to address uncertainty in estimating Yentna River sockeye salmon escapements using Bendix sonar. This review determined that the sonar-based SEG should be abandoned and replaced with 3 weir-based SEGs. Inseason management of the sport fisheries has not taken place since implementation of the aforementioned action plan. The action plan states sport harvest will not be used to determine escapements or in developing escapement goals. Further, the Susitna sport fisheries will remain open with a 3 fish bag limit unless directed otherwise by the BOF, and any harvest restrictions will be realized in the commercial fisheries, in most cases. Weir counts at Judd, Chelatna, and Larson lakes are used for postseason evaluation of run size (Figure 26).

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<sup>10</sup> Available at <https://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2016-2017/jointcommittee/5aac39.pdf>.

<sup>11</sup> Susitna Sockeye Salmon Action Plan available at [http://66.160.145.48/coms/jcis/pdfs/susitna\\_salmon\\_action\\_plan\\_200802.pdf](http://66.160.145.48/coms/jcis/pdfs/susitna_salmon_action_plan_200802.pdf).



At the 2017 BOF meeting, the BOF amended the *Central District Drift Gillnet Fishery Management Plan*. The purpose of this plan was to ensure adequate escapement of salmon into the Northern District drainages and to provide management guidelines to ADF&G (Appendix C1).

## **SPORT FISHERY PERFORMANCE AND ESCAPEMENT IN 2017 AND 2018**

In 2017, weirs were operated by the ADF&G Division of Commercial Fisheries to enumerate sockeye salmon escapements into 3 lakes: Judd (Talachulitna River) and Chelatna (Lake Creek) lakes of the Yentna River drainage and Larson Lake (Larson Creek) on the Susitna River. Sport fisheries on the Talachulitna River and Lake Creek are too far downstream of the weirs for timely inseason management. On Larson Creek, the sport fishery is in relatively close proximity to the weir, allowing for inseason management of the fishery. No actions affecting the sport fishery on Larson Creek were necessary in 2017; the SEGs for Chelatna, Judd, and Larson Lakes were all attained (Tables 52 and 53, Figure 26).

On the Knik Arm, the SEG for the Fish Creek of 15,000–45,000 salmon was exceeded in 2017 with about 63,500 sockeye salmon through the weir by 29 August (Table 52), and the Fish Creek personal use dipnet fishery was opened by Emergency order 26 July–31 July.

A foot survey of Bodenbug Creek counted 467 sockeye salmon, which was above the 1968–2017 average of 265 fish (Table 54).

The 2017 harvest across NCIMA was 12,316 sockeye salmon, which was below the 1977–2017 mean of 13,936 sockeye salmon (Table 47).

In 2018, escapement goals for sockeye salmon were exceeded at Fish Creek with 72,157 fish, achieved for Chelatna Lake with 20,437 fish, and achieved at Larson Lake with 23,652 fish (Tables 52 and 53). The 2018 escapement of Bodenbug Creek was 478 sockeye salmon (Table 54).

## **RAINBOW TROUT FISHERIES**

### **FISHERY DESCRIPTION**

The majority of wild rainbow trout angling occurs in the Knik Arm and Eastside Susitna Management Units. Wild rainbow trout fisheries of the ESMU extend from Willow Creek north along the Susitna River as far as Portage Creek and include Talkeetna River and the relatively smaller tributaries of the Chulitna River and East Fork Chulitna River. Most tributaries of the ESMU are coldwater streams originating in the Talkeetna Mountains. Access is primarily via the George Parks Highway and by jet boat. The WSMU includes tributaries of the Yentna River and all streams entering the Susitna River from the west (Figure 27). Westside tributaries are a mix of streams either originating out of lake systems or from the Alaska Range. Access to these fisheries is by raft, power boat, or airplane. Because of the shallow nature of many of the westside streams, drop-off float trips are common. Many lodges accommodate anglers fishing the WSMU.

### **HISTORICAL HARVEST**

Rainbow trout are a highly targeted sport fish within the NCIMA. To ensure sustained yield, various research projects have been conducted. Assessment of migration and the age and length characteristics of rainbow trout stocks were the primary focus of several investigations, including studies on rainbow trout stocks of the Deshka River, Lake Creek, and Talachulitna River in 1989 and 1990 (Bradley 1990, 1991), the Kashwitna River in 1991, Peters Creek in 1992 (Rutz 1992,

1993) and the North Fork Kashwitna in 1996. Onsite creel surveys were also conducted at Lake Creek in 1988 (Vincent-Lang and Hepler 1989) and 1989 (Bradley 1990).

There were significant differences in age composition and average length-at-age among Susitna River tributaries sampled during 1989–1992 (Rutz 1992, 1993). Rainbow trout tagged during 1991 and 1992 indicated low numbers of trout over 510 mm in total length, which was the size limit for trophy trout defined in the *Criteria for Establishing Special Management for Trout* (5 AAC 75.013). This lack of adequately-sized fish, combined with the relatively slow growth rate of Susitna River basin trout in comparison to other Alaska waters containing trophy trout, suggests that these Susitna River rainbow trout stocks are not viable candidates for management as trophy fisheries (Rutz 1992).

Northern pike investigations conducted in the mid-1990s revealed possible impacts on Susitna River drainage rainbow trout stocks as a direct result of northern pike colonization and proliferation throughout the area, and several lake and river populations of rainbow trout in the WSMU appear severely impacted by northern pike predation (Rutz 1999).

NCIMA rainbow trout harvests ranged from 9,198 to 74,962 fish and averaged 30,978 fish from 1977 to 2016, accounting for 39% of the average harvest in Region II and 27% in the state (Table 55). From 1990 (when estimates of catch became available) through 2016, the average catch of rainbow trout in the NCIMA was 136,589 fish (Table 55). Average rainbow trout harvests from KAMU during this time period accounted for approximately 74% of the average total NCIMA harvest (calculated from Table 55). The KAMU fishery also dominates the catch, the majority of which is from stocked lakes. A large percentage of catch and harvest is a result of the stocked lakes program.

The WSMU accounted for 13% of the average NCIMA harvest and the Eastside Susitna unit accounted for 12% from 1977 to 2016 (calculated from Table 55). The WCIMU made up 1% of the average NCIMA harvest from 1977 to 2016.

In the ESMU, Willow and Montana creeks produced the largest rainbow trout harvests until 1997 when the BOF designated them as catch-and-release fisheries for rainbow trout and Arctic grayling (Table 56). Since 1997, the largest catches of rainbow trout in the ESMU are still from Willow and Montana creeks (Table 57). The Deshka River and Lake Creek generally provide the largest harvests of rainbow trout among WSMU fisheries, but Lake Creek and Talachulitna River usually produce the largest catches (Tables 58 and 59). In general, a comparison of long- and short-term averages among Susitna River tributaries shows a noticeable drop in rainbow trout harvest and an increase in catch. Increased catch rates indicate growing fisheries on the Susitna River which could be attributed to increased fishing pressure due to Chinook salmon fishery restrictions.

## **FISHERY MANAGEMENT AND OBJECTIVES**

Management of wild rainbow trout in the NCIMA has undergone numerous changes. A statewide management plan (5 ACC 75.220) and policy (5 ACC 75.222) for the management of sustainable wild trout fisheries was adopted by the BOF in March 2003 as a means of uniformly managing wild trout stocks across Alaska (Appendix C1). The goal of the policy is to protect the largely intact wild trout populations unique to Alaska by conservatively managing for optimal sustained yield. Under the optimal sustained yield concept, fishery benefits including quality of experience, diversity of opportunity, conservative consumptive harvest opportunity, and economic benefits are considered while maintaining healthy stock status (e.g., biologically desirable size compositions

and abundance levels) and genetic diversity. Conservative management of wild trout in the NCIMA follows these standards: a bag and possession limit of 2 trout, of which only 1 may be over 20 inches in total length, with an annual limit of 2 trout over 20 inches in total length. Beginning in 1987, prior to the development of statewide management standards, wild rainbow trout fisheries of NCIMA were managed under the conservative yield concept, aimed at maintaining historical size and age compositions and abundance.

In addition, many tributaries or sections of tributaries in the NCIMA are designated as rainbow trout special management waters, either as trophy rainbow trout waters or as catch-and-release-only waters. A major portion of the Eastside Susitna Management Unit, from the junction of the Susitna and Talkeetna rivers upstream to Devils Canyon, has been managed for trophy-sized trout (trout over 20 inches) since 1987. Under this strategy, only 1 trout 20 inches or more in total length is allowed daily with a seasonal limit of 2 trout over 20 inches. All trout less than 20 inches must be released immediately. An unbaited, single-hook lure requirement complements this strategy.

Catch-and-release rainbow trout fisheries include the Talachulitna River, most of the Lake Creek drainage, much of the Deshka River, the Fish Creek drainage located within the Talkeetna River drainage, the North Fork of the Kashwitna River, and Willow and Montana creeks. Unbaited, single-hook lures are mandatory in all catch-and-release waters.

Wild trout fisheries are not supplemented with hatchery trout in the Susitna River drainage. Past public testimony has suggested little interest in the use of hatchery fish to augment wild stocks and the current stocking policy supports the public's stance. Stocked rainbow trout are generally managed for maximum yield (see the Stocked Lake Fisheries section below).

In 1997, Willow and Montana creeks, previously the largest producers of rainbow trout harvest in the ESMU, became catch-and-release fisheries. This accounted for part of the large drop in harvest for the ESMU from previous years. These 2 fisheries, along with the Talkeetna River, dominate ESMU catch (Table 57).

## **SPORT FISHERY PERFORMANCE IN 2017**

The 2017 harvest of rainbow trout in the Knik Arm Management Unit was 9,375 fish (Table 55). The 2012–2016 average harvest for this stock was 9,507 fish (Table 55). Most of the rainbow trout 2017 harvest in the KAMU was from stocked lake fisheries: the Kepler Lake complex (1,664 fish), Finger Lake (1,185 fish), followed by two wild lakes; Wasilla Lake (817) and Big Lake (711) (Tables 60 and 61).

Rainbow trout catches in KAMU during 2017 were highest at Kepler Lake complex (7,344 fish), Bonnie Lakes (6,899 fish), closely followed by Wasilla Lake (4,046 fish), and Big Lake (3,426 fish) (Tables 62 and 63). Total catch for 2017 in the KAMU was 51,065 fish (Table 63), which was the highest in the NCIMA.

In the ESMU, the 2017 harvest was 817 rainbow trout and below the five-year ESMU average of 956 fish (Table 55). The 2017 WSMU harvest of 362 fish was below the five-year average of 486 fish (Table 55).

The 2017 catch for the ESMU was 25,774 rainbow trout; this was less than the 2012–2016 average of 38,876 fish. The 2017 WSMU catch was a new record low of 5,988 fish; the 5-year average for WSMU is 28,686 fish (Table 55). This record low may be due to Chinook fishery restrictions throughout both management areas.

Catch from WSMU fisheries is dominated by Lake Creek (Table 59). During 2017, only 40 rainbow trout were estimated to have been harvested in Lake Creek from a catch of 2,525 fish (Tables 58 and 59). The Talachulitna River drainage, which is a catch-and-release-only fishery, produced a catch of 737 rainbow trout (Table 59). It is believed that northern pike predation is responsible for the decline in Alexander Creek rainbow trout catches since 1990; there was a reported catch of 87 in 2017 and the 2012–2016 mean is 75 rainbow trout. (Table 59). Suppression efforts have been instituted since 2010 for northern pike on this system (see Northern Pike Fisheries section).

## **NORTHERN PIKE FISHERIES**

### **FISHERY DESCRIPTION**

Northern pike are not indigenous to the NCIMA although they are indigenous north of the Alaska Range. They were illegally introduced into the area during the early 1950s. Since then, northern pike have expanded their range both naturally and through subsequent illegal stockings. They have been reported in more than 100 lakes and more than a dozen tributaries of the Susitna River (Sweet and Rutz 2001). Prior to about 1992, several of these lakes consistently produced northern pike in the trophy-class range (greater than 40 inches or 15 lb for catch-and-release honorary certificates), and it was common to find fish weighing up to 20 lb and occasionally over 30 lb.

The potential for northern pike to proliferate in the Susitna River drainage is immense. Most of the habitat suitable to northern pike is found within the lower-lying WSMU. The headwaters of the Deshka River (Petersville Road) across the Kahiltina River to Hewitt Lake, then down to the mouth of the Susitna River, encompasses areas where most of the northern pike populations and habitat exist. In the KAMU, most northern pike habitat exists in a triangle created by the Susitna River and Parks Highway south of Willow (Figure 13). This area includes the Nancy Lake, Big Lake, and the Little Susitna River drainages, and lakes of the Susitna Flats such as Flathorn and Figure Eight lakes. Growing or even new northern pike fisheries are expected in these areas as northern pike continue colonization of the NCIMA. Northern pike were documented in Big Lake and Nancy Lake in 2005. The amount of available northern pike habitat in ESMU waters is sparse when compared to that of the WSMU or KAMU. Regardless, northern pike have been documented or reported in some of the lakes in the ESMU (Appendix II).

### **HISTORICAL HARVEST AND CATCH**

In 1977, the first-year harvest estimates were available, and harvest of northern pike in the NCIMA was only 132 fish, accounting for only 1% of the statewide harvest of northern pike (Table 64). Northern pike harvests slowly increased through 1983 when the harvest totaled 944 fish. Since 1984, harvest of northern pike has greatly increased, likely due to continued range expansion and increased angler interest. Interest in northern pike as a sport fish grew in the mid-1990s as concerns about their spread increased and regulations were subsequently liberalized (Appendix B4). As interest increased, harvest increased sharply (Figure 28). Harvests have been over 5,000 fish in all years since 1990, except 1994 and 1995. Harvest was a record high in 2013 with 18,764 northern pike. The 2012–2016 average harvest in the NCIMA was 13,024 fish, much higher than the historical (1977–2016) average of 6,732 fish (Table 64). This jump in harvest reflects the 2011 BOF regulation change requiring anglers to harvest all northern pike caught in the Susitna and West Cook Inlet drainages. Streams in these management areas are listed by ADF&G as having

Chinook salmon “stocks of concern” so this change was implemented as a way to mitigate predation of smolt.

Since 1990, the first-year catch estimates were generated from the SWHS, and the average catch of northern pike in the NCIMA has been about 3.5 times the harvest. The first northern pike catch from the ESMU and WCIMU was documented in the SWHS in 1996 and 1993, respectively (Table 64). Previously, other than anecdotal information, no information was available regarding northern pike catch or harvest from these areas.

## **FISHERY MANAGEMENT AND OBJECTIVES**

The management objective for this fishery is to maximize harvest opportunity. The majority of the NCIMA does not have a bag or possession limit for northern pike. Note that this contrasts with other areas of Alaska where northern pike are indigenous and are managed conservatively.

In 1997 and 2002, the BOF liberalized harvest methods in many lakes within the NCIMA where northern pike populations were pervasive (Appendix B4) by allowing use of 5 lines while fishing through the ice. Five-line areas were further expanded at the 2008 BOF meeting with the addition of several tributaries of the Susitna River drainage that were thought to contain mostly northern pike. Additional water bodies may be added to this list as northern pike gain strongholds in new areas through continued range expansion. In 1998, the BOF adopted a slot limit regulation for Alexander and Trapper lakes to provide anglers the opportunity to catch large fish. The daily bag limits were set as follows: for northern pike less than 22 inches in total length, there was no limit; for northern pike between 22 and 30 inches, there was no retention; and for northern pike over 30 inches, the limit was 1 per day. The objective was to remove fish less than 22 inches in length from the population while protecting fish in the 22–30 inch range, allowing them a chance to attain a larger size when they would again be available for harvest. In 2002, the slot limit was repealed for Trapper Lake when it was determined that only Alexander Lake would be used to evaluate the effectiveness of a slot limit management strategy. Evaluation took place in 2008. Length frequencies were found to be similar between northern pike sampled in 1995–1996 and those sampled in 2008. The slot limit may have maintained the historical size structure, providing continued opportunity to harvest trophy-sized northern pike, whereas liberalized regulations on other popular lakes including Flathorn lakes have generally resulted in low numbers of large northern pike. Both liberalization and limits can result in angler dissatisfaction because liberal regulations tend to result in high abundance of smaller northern pike whereas a slot limit allows a harvest of mostly small northern pike (less than 22 inches). To remedy dissatisfaction with the slot limit, in 2009 the BOF met out of the 3-year cycle to change the slot limit to a size limit of 27 inches. This management strategy allowed unlimited harvest of northern pike less than 27 inches in total length and a daily bag limit of 1 northern pike over 27 inches in length. At the regularly scheduled 2011 BOF meeting, the size limit was repealed, and unlimited harvest of northern pike was allowed on Alexander Lake. Special provisions were added to Big and Nancy lakes to use bait from November 1 to March 15 to target northern pike through the ice. The BOF also changed area regulations to increase harvest by making it illegal to release northern pike back into the water alive in all Susitna drainage and WCIMU waters.

Efforts are made annually to verify the suspected existence of northern pike in certain waters around NCIMA. Northern pike have been documented in Anderson and King lakes, which are intermittently connected to the Cottonwood Creek system. ADF&G has had anecdotal reports of northern pike in Jim Creek, but their presence has not been documented. Because Cottonwood and

Jim creek systems have ideal northern pike habitat, salmonid populations would probably be severely affected by colonization. The Little Susitna River has limited northern pike habitat, so the negative effects to salmonid stocks may be limited there, except for the sockeye salmon production that occurs in Nancy Lake. Areas that once contained healthy fish populations but that now contain mostly northern pike include Alexander Lake and all inlet streams, Fish Creek of the Nancy Lake canoe system, Fish Creek of Kroto Slough, Fish Lake Creek of the Yentna River, and Three Mile River and lakes of WCIMU.

Future management of northern pike in the NCIMA will follow guidelines and strategies outlined in the *Management Plan for Invasive Northern Pike in Alaska* (ADF&G 2007) implemented in 2005, and the *Alaska Aquatic Nuisance Species Management Plan* (Fay 2002). In 2010, a regional effort was made to prioritize northern pike waters in the Matanuska–Susitna, Anchorage, and Kenai areas for eradication or suppression. Prioritization was based on many factors, including threat to species existence, threat to an existing fishery, the magnitude of the fishery, economic impact, cultural significance, feasibility, probability of success, etc.<sup>12</sup> All waters have not yet been prioritized, although Alexander Creek was fully evaluated using this priority matrix and rated a number-one priority for suppression. Legislative funding was secured to initiate a full-scale gillnetting effort on side channel sloughs of Alexander Creek beginning in 2011. See Appendix C in Oslund and Ivey (2010) for a history of northern pike in the Alexander Creek drainage, impacts to anadromous and resident fish species, and past studies conducted on northern pike within this system. To date (2018 field season), 22,058 northern pike have been removed from this system (2,000 were killed during the feasibility study in 2009–2010) as a result of suppression efforts (P. Bradley, Fishery Biologist, ADF&G, Palmer, personal communication).

## **SPORT FISHERY PERFORMANCE IN 2017**

The NCIMA estimated harvest of northern pike during 2017 season was 9,094 fish and the 2012–2016 average harvest was 13,024 fish (Table 64). The KAMU and WSMU each accounted for the majority of the harvest, with the remainder from the ESMU and WCIMU (Table 64). Nancy Lake Complex and Anderson and King lakes (Cottonwood Creek) contributed the majority of the KAMU harvest in 2017 (Table 65). Alexander Creek drainage (including Alexander and Sucker lakes) were the main producer of northern pike (3,302) in the WSMU in 2017 (Table 66). Estimated catch of northern pike in the NCIMA during 2017 was 10,693 fish, which was well below the 5-year average of 21,158 (Table 64).

## **STOCKED LAKE FISHERIES**

Currently, 86 lakes in the NCIMA are stocked on an annual or biennial basis. These lakes range from 2 to 362 surface acres and are stocked with a variety of sizes and species of game fish including rainbow trout, nonanadromous coho and Chinook salmon, Arctic char, and Arctic grayling.

In most cases, stocked landlocked lakes represent new fisheries because game fish were not present before stocking occurred. Stocked lakes benefit anglers and related businesses by providing diverse, year-round fishing opportunities and by diverting angling pressure from wild stocks. Most stockings are directed toward road-accessible lakes that tend to draw entire family groups for some

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<sup>12</sup> Kristine Dunker, Fishery Biologist, ADF&G, Memorandum to Division of Sport Fish Headquarters. *Region II Invasive Northern Pike Priorities*. Alaska Department of Fish and Game, Anchorage.

combination of fishing, camping, picnicking, boating, snow machining, and ice skating (Appendix J1). Many lakes have additional restrictions on motor use, access, and quiet hours listed in lake management plans established by the Matanuska–Susitna Borough (Appendix J1).

## **HISTORICAL STOCKING PROGRAM**

The ADF&G stocking program began in 1952 when 2 lakes received 22,000 rainbow trout fry. Eight species of salmonids have been stocked since 1952. Steelhead (or rainbow trout) from the Karluk River (Kodiak) and 4 stocks of Alaska rainbow trout (Naknek River, Talarik Creek, Swanson River, and Big Lake), as well as rainbow trout from federal and private hatcheries located in Idaho, Montana, Oregon, and Washington have been stocked by ADF&G. Landlocked salmon fisheries have been supported by coho salmon from Washington State and at least 9 Alaskan egg-take sources, and Chinook salmon from 3 Alaskan sources. Since 1979, only indigenous Alaskan fish have been stocked in the NCIMA. Arctic grayling egg-take sources have been Junction Lake, Tolsona Lake, and Moose Creek. Arctic char, originating from egg takes at Aleknagik Lake, and lake trout from Paxson Lake were first stocked in 1988.

The final egg take from Big Lake rainbow trout broodstock at Fort Richardson Hatchery took place in 1993. All resulting fingerlings were stocked in Big Lake drainage lakes and all remaining broodstock was stocked in Anchorage area landlocked lakes and in Big Lake. Swanson River rainbow trout are the sole rainbow trout broodstock source that remained at the Ft. Richardson Hatchery until its closure in 2012. Beginning in 1994, Big Lake drainage system lakes having intermittent outlets have been stocked with triploid all-female Swanson River rainbow trout.

## **CURRENT STOCKING PROGRAM**

Rainbow trout, coho salmon, Arctic char, and Chinook salmon are now the primary species used in the ADF&G stocking program. Rainbow trout composed 80% of all fish stocked in landlocked lakes within the NCIMA in 2017–2018. Annual releases of all species during 2017 totaled 1,201,749 fish (Table 67).

Most rainbow trout released into NCIMA waters are fingerlings. Most fingerlings weigh 3–4 g and are released in June or early July. Catchable fish weigh around 100 g and are stocked in lakes without indigenous fish to increase angling opportunities and help maintain good catch rates in heavily fished lakes. Nearly 15% of the rainbow trout stocked in the NCIMA are catchable size at introduction. Anglers expended a total of 19,692 fishing days to catch 25,855 rainbow trout in 2017 (Table 68).

Nonanadromous coho salmon are normally stocked as fingerlings in May at about 3–5 g each. These fish achieve a harvestable size (6 to 11 inches) at age 2, the year following release. Most coho salmon are either harvested or die after becoming sexually mature by age 3. Stocked coho salmon support diverse winter fishing opportunities in the NCIMA.

Historically, Arctic grayling were stocked in early summer as “subcatchables” (below catchable size) weighing up to 70 g. The first year Arctic grayling catchables were available from the new William Jack Hernandez Sport Fish Hatchery for stocking was in 2013; these fish were 100 g at release. Catch rates were expected to improve with these larger stocked fish. However, the grayling program was cut during 2014–2017 due to budget cuts but brought back in 2018 when funding became available again. Anglers only caught 414 Arctic grayling in 2017, which was down due to program cuts (Table 68).

Chinook salmon are stocked in early October as landlocked catchables, weighing about 100 g, providing winter ice fishing opportunities in 4 heavily fished lakes. Anglers caught 5,708 Chinook salmon in 2017 (Table 68). Chinook salmon are easily caught, and lakes stocked with Chinook salmon produce successful angler-days. Lakes stocked with Chinook salmon are popular youth fisheries for this reason.

Arctic char are stocked in 9 lakes as triploid catchables about 100 g at release, providing more diversity for sport fishing (Table 69). Arctic char brood weighing 1,300–2,200 g were stocked late October–early November in 2 lakes (Table 69). On average, approximately 300 brood (diploid) Arctic char are stocked annually.

## STOCKING PROGRAM EVALUATIONS

Research has accompanied development of the area's stocking program since the early 1970s. The primary objective of this research has been to develop cost-effective stocking practices that provide both expanded and diverse fishing opportunities. A survey of anglers fishing stocked lakes in the NCIMA in 1977 revealed that 70% preferred to fish for rainbow trout, 19% desired landlocked coho salmon, and 11% listed Arctic grayling as their choice (Watsjold 1978).

Lake stocking research has also been directed toward the following: evaluation and selection of rainbow trout broodstock, development of effective stocking densities and sizes of stocked fish for various lake environments, establishment of optimal time and frequency of stockings in various landlocked lake environments, evaluation of sterile coho salmon and rainbow trout for stocking lakes that have open or intermittent linkage with drainages that support wild fish, and evaluation of female diploid rainbow trout to eliminate high mortality associated with spawning males (Bentz et al. 1991). Although research indicates that the contributions from the landlocked lake stocking program have been significant to date, poor survival of stocked fish has also been documented.

Studies have also documented growth of stocked rainbow trout fingerlings released in July and August weighing 1–2 g. By June of the year following introduction, age-1 fingerlings will typically have a total length that ranges from 3 to 6 inches; at age 2, fish range from 6 to 11 inches; at age 3 from 11 to 16 inches; and at age 4–5 they are typically above 16 inches in total length. Approximately 70% to 80% of the rainbow trout harvested from stocked lakes are age 2, and about 15% to 20% are age 3. Few stocked rainbow trout exceed age 5, and relatively few rainbow trout achieve harvestable size prior to age 2 (Havens et al. 1995).

## FISHERY MANAGEMENT AND OBJECTIVES

Presently there are 3 lake management plans addressing stocking for NCIMA lakes: *Finger Lake Management Plan*, *Matanuska Lakes Complex Management Plan*, and *Matanuska-Susitna Valley Small Lakes Management Plan* (ADF&G Region II Statewide Stocking Plan for Sport Fish 2019–2023, 2019 Update<sup>13</sup>).

The primary objective of the stocking program is to provide additional fishing opportunities in a cost-effective manner on a sustainable basis by stocking lakes with game fish that are indigenous to Alaska. An additional objective is to reduce effort on the area's wild stocks and ensure that stocking does not negatively impact wild stock genetics or other fisheries. All stocking is

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<sup>13</sup> <https://www.adfg.alaska.gov/static/fishing/pdfs/hatcheries/19region2.pdf>, accessed January 2019.



conducted in accordance with guidelines set forth in the *Statewide Stocking Plan for Sport Fisheries* (<https://www.adfg.alaska.gov/index.cfm?adfg=fishingSportStockingHatcheries.stockingPlan>, accessed January 2019).

Stocked landlocked lakes fall under the maximum sustained yield management concept. Bag and possession limits under this management concept are 5 rainbow trout, only 1 over 20 inches, with an annual limit of 2 fish over 20 inches, except in the stocked lakes of the Knik Arm and Susitna River areas, where the annual limit is 10 rainbow trout 20 inches or longer. Although stocked lakes are primarily managed for put-and-take fisheries, 3 stocked lakes (Long Lake in the Kepler Lake Complex, Wishbone Lake, and X Lake) have been established for catch-and-release fishing. These 3 lakes allow only unbaited, artificial lures, and are closed November 1 to April 30.

Future management of stocked lakes has 2 main issues:

- 1) Northern pike have been illegally stocked in local lakes. An invasive species program is currently underway (see northern pike section of this report) with a goal to control or eradicate northern pike in stocked lakes and to prevent future illegal stockings. The alternative to northern pike control is to discontinue or alter stocking on a case-by-case basis. Differences in lake structure with respect to available northern pike habitat and deepwater refuges for stocked species warrant different approaches to management. For example, due to the presence of northern pike, stocking in Big and Little No Luck lakes was discontinued and stocking has been altered and limited to fully landlocked catchable fish only in South Rolly, Prator, and Memory lakes (Table 69).
- 2) The second issue is ongoing in our area. In the past 20 years, the Matanuska–Susitna Valley population has increased enormously. Subdivisions have been developed around lakes that once had no development and very little use. Now sport fishing, wildlife viewing, and jet skiing are new activities on many of these lakes. Increasing numbers of conflicts between lakefront owners and other users concerning noise and boat wakes has led to the creation of Matanuska–Susitna Borough Lake Management Plans for a number of Matanuska–Susitna Valley Lakes (Appendix J1). These plans were developed through a public meeting process that determined prohibited activities for each lake. As the population continues to increase, the number of management plans that limit use of lakes will increase as well.

## **SPORT FISHERY PERFORMANCE IN 2017**

In 2017, 76 lakes were stocked with 524,716 game fish (Table 69). The majority of these lakes are located in the KAMU and the remainder in the ESMU. Releases in 2017 included 397,591 rainbow trout, 85,683 coho salmon, and 7,317 Arctic char (Table 69).

An estimated 19,692 angler-days of participation resulted from the area's landlocked stocking program in 2017 (Tables 68), excluding effort at lakes having both stocked and indigenous game fish. The 2017 catch from stocked landlocked lakes included an estimated 25,855 rainbow trout, of which 5,306 (21%) were harvested; 5,708 landlocked salmon, of which 36% were harvested; 2,189 Arctic grayling, of which 49% were harvested and 804 Arctic char, of which 31% were harvested (Table 68).

The Kepler Lake Complex (including Kepler, Bradley, Canoe, Echo, Irene, Long, Matanuska, and Victor lakes) supported 4,847 angler-days of effort. Finger Lake supported 5,337 angler-days of

effort (Table 2). Collectively, these 2 sites yielded approximately 35% of the effort associated with stocked landlocked lakes within the NCIMA<sup>14</sup>.

Rainbow trout and landlocked Chinook salmon dominate catch in stocked lakes. In 2017, these 2 species composed the majority of the stocked lakes catch (Table 68).

## PERSONAL USE AND SUBSISTENCE FISHERIES

### OVERVIEW

Brannian and Fox (1996) and Reimer and Sigurdsson (2004) provide a detailed history of subsistence and personal use salmon fishing regulation and management in UCI. Sockeye salmon is the predominant harvest in these fisheries in UCI.

Fish Creek sockeye salmon have long been used in commercial, subsistence<sup>15</sup>, and personal use fisheries. The Knik Arm subsistence fishery was operational through 1970. In 1971 the fishery was closed because of declining sockeye salmon escapements into Fish Creek. It was reopened in 1984 and 1985, and then closed again in 1986.

The Fish Creek commercial set gillnet and personal use dip net fisheries along the northwest shore of Knik Arm were initiated by the BOF in 1986 to harvest sockeye salmon surplus to spawning and egg-take needs. These fisheries continued annually, contingent upon a projected escapement of 50,000 Fish Creek sockeye salmon. The commercial gillnet fishery was closed by BOF action from 1999 through 2001 due to low runs in 1997 and 1998. The fishery was eliminated by the BOF in 2002 because runs continued to be below desired escapement levels. Average annual harvest of sockeye salmon in the commercial gillnet fishery while in existence (1987–1998) was 23,443 fish (Table 70). The personal use fishery was open in both 2017 and 2018.

The *Upper Cook Inlet Subsistence Management Plan* (not in current regulations) provided for a subsistence set gillnet fishery in marine waters in the Northern District of UCI in 1991, 1992, and 1994. Subsistence set gillnet fishing was allowed for a total of 17 days between May 21 and September 28. Hours for the fishery were 8:00 AM until 8:00 PM. The threat of a court-ordered closure of this subsistence fishery for the 1995 season caused the BOF to take action to allow the fishery to proceed as a personal use gillnet fishery. Annual harvest ranged from 3,900 fish in 1985 to 53,300 fish in 1994 with an average harvest of 31,500 sockeye salmon (see Table 60 in Sweet et al. 2003). Coho, sockeye, and pink salmon were harvested as well. This personal use gillnet fishery was eliminated by the BOF prior to the 1996 season.

### FISHERY DESCRIPTIONS

The current personal use fisheries within the NCIMA include a sockeye salmon dip net fishery in Fish Creek, a dip net fishery for Alaska residents 60 or older on the Beluga River, and a personal use eulachon (*Thaleichthys pacificus*) fishery, the majority of which takes place in the Susitna River. There is also a small harvest of eulachon (smelt) in the Knik Unit at the mouth of Fish Creek (Table 71).

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<sup>14</sup> Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish [cited December 2019]. Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

<sup>15</sup> Engel, L. and D. Vincent-Lang. *Unpublished*. Area Management Report for the recreational fisheries of Northern Cook Inlet. Report to the Alaska Board of Fisheries, November 1992. Alaska Department of Fish and Game, Division of Sport Fish, Anchorage.

Subsistence fisheries include the Yentna River subsistence fish wheel fishery and the Tyonek subsistence fishery. The Yentna subsistence fishery occurs in the mainstem Yentna River from its confluence with Martin Creek upstream to its confluence with the Skwentna River and is prosecuted only by fish wheel. The Tyonek subsistence fishery occurs adjacent to the community of Tyonek; harvest occurs by gillnets (see also Appendix C1).

## **FISH CREEK SOCKEYE SALMON STOCKING PROGRAM**

Due to declining abundance of sockeye salmon during the early 1970s, stocking of Fish Creek with sockeye salmon was initiated in 1975. The Big Lake state fish hatchery supported the program through 1992 using Fish Creek broodstock. After the Big Lake hatchery closed in 1993, stocking continued using Fish Creek broodstock reared at the Eklutna Hatchery, a private nonprofit hatchery operated by CIAA (Cook Inlet Aquaculture Association) and located on the Knik River in the Eklutna Power Plant tailrace. CIAA discontinued operation of the Eklutna Hatchery in 1998 following the 1997 release, at which time the program was switched to the Trail Lakes Hatchery, another CIAA facility. Production goals were 9 million sockeye salmon eggs of Fish Creek brood, from which sockeye salmon fry and smolt were released annually into the Big Lake drainage. Stocking was discontinued after the 2008 release.

## **HISTORICAL HARVEST AND ESCAPEMENT**

The personal use dip net fishery on Fish Creek sustained an annual average harvest of 10,588 sockeye salmon from 1987 to 2018, ranging from 463 fish in 2001 to 37,224 fish in 1993 (Table 70). The fishery was closed by EO after the third day in 2001 and since then has been opened 7 times (2009–2011, 2014–2015, and 2017–2018) with an average harvest of 12,307 salmon (Table 70). Prosecution of this fishery is dependent on projected escapements into Fish Creek. This dipnet fishery may open between July 10 and July 31 when the escapement of sockeye salmon is projected to be more than 35,000 fish. Levels of escapement in the past 10 years vary from 18,823 sockeye salmon in 2012 to 126,836 in 2010 (Table 52).

The average Susitna River eulachon harvest from 1985 to 2015 was 3,609 fish and ranged from 16,936 fish to 0 reported harvest (Table 71). The inriver run of eulachon to the Susitna River drainage ranges in the millions with personal use harvest accounting for less than 1% of this run. In terms of harvest, this fishery is probably one of the most underutilized in the state. It is managed inseason with spot checks conducted by ADF&G staff in the Palmer office and postseason through the SWHS. It is likely that unless increased access is provided to the Susitna River, the personal use harvest of eulachon will remain fairly stable. It should be noted that no reported harvest has occurred since 2007 in the KAMU, and harvest for the Susitna River varies, which most likely indicates low participation in this fishery, making it difficult to estimate harvest through the SWHS, which randomly surveys anglers.

The personal use dip net fishery on Beluga River began in 2008. The peak of salmon harvest in this fishery to date is 225 salmon in 2009 (Table 72). The lowest harvest to date was in 2012 with a harvest of only 16 salmon (Table 72).

Average annual salmon harvest in the upper Yentna River subsistence fishery was 570 fish from 2012 to 2016 (Table 73). Sockeye salmon are the primary species harvested. For the same period, the average sockeye harvest was 372 fish (Table 73).

The Tyonek subsistence fishery average Chinook salmon harvest from 1980 to 2016 was 1,441 fish, which was just above the 2012–2016 average of 1,125 Chinook salmon (Table 74). An average of 192 sockeye and 178 coho salmon were harvested from 1980 to 2016 (Table 74). Very few chum and pink salmon are harvested in this subsistence fishery.

## **FISHERY MANAGEMENT AND OBJECTIVES**

In 2002, the SEG for sockeye salmon on Fish Creek was changed from a point goal of 50,000 fish to a range of 20,000–70,000 fish and the Fish Creek dip net fishery was modified under the *Upper Cook Inlet Personal Use Salmon Fisheries Management Plan* (5 AAC 77.540). The commissioner opened the fishery from July 10 through July 31 if ADF&G projected the escapement of sockeye salmon into Fish Creek to be above the upper end of the escapement goal of 20,000–70,000 fish. Prior to 2002, the fishery was open until closed by EO.

In 2017 at the Upper Cook Inlet BOF meeting, the SEG for sockeye salmon on Fish Creek was changed from a goal of 20,000–70,000 fish to 15,000–45,000 fish and the commissioner may open, by emergency order, the personal use dip net fishery in Fish Creek from July 15 through July 31, if ADF&G projects that the escapement of sockeye salmon will be more than 35,000 fish.

Participants in the fishery must obtain an UCI personal use permit, which also includes the Kenai River and Kasilof River personal use dip net fisheries, and the Kasilof River set gillnet personal use fishery. The annual limit is 25 fish for the head of household plus 10 fish for each additional member of the household and is inclusive of all UCI personal use fisheries. Permits must be returned with the total catch recorded. The closing date is set at July 31 to limit the number of coho salmon harvested.

The management objective for the Fish Creek personal use fishery is to allow escapement of sockeye salmon along the entire course of the run while harvesting fish in excess of spawning needs. There are no specific management objectives for the personal use eulachon fishery. All fisheries are managed to provide sustained yield.

Management of Fish Creek sockeye salmon has undergone many changes in conjunction with an observed decline in total escapements in recent years. During the February 2002 BOF meeting, Fish Creek sockeye salmon were designated a stock of yield concern after demonstrating a chronic inability to meet the escapement goal (50,000 fish at the time) over the previous 5 years (Figure 26 and Table 52). At the same meeting, an SEG of 20,000–70,000 fish was recommended based on wild fish (prehatchery) escapements from 1938 to 1978 (Bue and Hasbrouck *Unpublished*<sup>8</sup>). An action plan was developed, as directed by the BOF in 2002, to modify current land use patterns that may adversely affect fish habitat resource values in the Fish Creek watershed through education, increased community planning involvement, escapement monitoring, and research toward the goal of achieving the SEG. Specific actions recommended for achieving this objective may be found in Sweet et al. (2004). During the February 2011 BOF meeting, the BOF determined a personal use fishery to be opened when ADF&G projects the escapement to exceed 50,000 sockeye salmon. Contributions of hatchery fish to the Fish Creek escapement were estimated to be 17% for 2012 and have ranged (between 2002 and 2012) from 2% in 2002 to 73% in 2006 (Table 75). Fish Creek was last stocked by CIAA in 2008 and hatchery fish no longer contribute to this return.

Litchfield and Willette (2002) found dissolved oxygen and nutrient concentrations similar to levels experienced in the early 1980s, suggesting no relationship to the decline in survival of Fish Creek

sockeye salmon. Aggregate survival (hatchery and wild fish) to the smolt life stage was one-quarter the survival rates of other sockeye salmon-producing systems during the late 1980s. Further, wild survival to the smolt stage was lower than hatchery-origin fish. Two plausible explanations for the overall decline in wild stock productivity were identified: 1) a cofferdam at the Big Lake outlet could have reduced productivity of the subpopulation spawning below the dam, and 2) Big Lake Hatchery operations prevented sockeye salmon from entering Meadow Creek above the hatchery in an effort to reduce potential spread of disease (Litchfield and Willette 2002). The cofferdam was removed in 2004 in an attempt to improve passage of fry into the Lake (Hasbrouck and Edmundson 2007). The Fish Creek stock was reevaluated at the 2005 BOF meeting where it was determined to no longer be a stock of yield concern. The Fish Creek personal use fishery was opened in both 2017 and 2018.

The BOF established the Skwentna River personal use salmon fishery in March 1996. As a result of actions by the State of Alaska Supreme Court and the BOF, it was reinstituted as the Upper Yentna River subsistence salmon fishery beginning in 1998. The open season for this subsistence fishery is from July 15 through July 31, from 4:00 AM until 8:00 PM on Mondays, Wednesdays, and Fridays. During the February 2011 meeting, the BOF determined 400–750 salmon other than Chinook salmon are reasonably necessary for subsistence uses in the Yentna River drainage.

In May of 2018 by emergency regulation, the BOF modified the Upper Yentna River subsistence fishery to retention of Chinook salmon and the fishery was held June 1 through June 30 and July 15 through August 7. Fishing was allowed 4:00 AM until 8:00 PM on Mondays, Wednesdays, and Fridays. The household limit for Chinook salmon was 5 for the head of household and 2 Chinook salmon for each additional member of the household in addition to 25 salmon, other than Chinook salmon, for the head of the household, and 10 salmon, other than Chinook salmon, for each additional member of the household.

Regulations for a Tyonek subsistence fishery were established in 1980 and amended in 2011. Participants are allowed to harvest all salmon species. Residents of Tyonek are the major participants in the fishery. The season starts on May 15 and continues through October 15. The fishery is open May 15–June 15 on Tuesdays, Thursdays, and Fridays, from 4:00 AM–8:00 PM. From June 16 through October 15, fishing shifts to Saturdays only. This fishery is prosecuted by gillnet 10 fathoms in length by 45 meshes deep, with 6-inch mesh. During the February 2011 meeting the BOF determined 700–2,700 Chinook salmon and 150–500 salmon other than Chinook salmon are reasonably necessary for subsistence use in the Tyonek Subdistrict.

During 2008, the BOF opted to create a personal use fishery for residents over the age of 60 in the Beluga Area. This fishery was predicated on the loss of fishing opportunity in the Beluga area as a result of northern pike predation on sockeye salmon in Three Mile Creek, lack of access to area fisheries, and poor Chinook salmon returns to WCI streams. The fishery occurs annually from July 10 to August 31. A permit holder may obtain his or her annual limit of 25 salmon per head of household and 10 additional salmon per listed dependent. No Chinook salmon may be retained and a cap of 500 other salmon is enforced. All Chinook salmon caught must be released immediately. This permit is only good for the Beluga River and does not allow the permittee to participate in any other Alaskan personal use fishery or fish by proxy.

## **FISHERY PERFORMANCE AND ESCAPEMENT IN 2017 AND 2018**

With runs projecting to exceed the upper end of the escapement goal, the personal use fishery on Fish Creek was opened in 2017 and 2018 due to strong runs enumerated by the Fish Creek weir. The total weir count for sockeye in 2017 was 68,882 fish and 72,157 in 2018 (Table 52).

Annual harvest in the upper Yentna River subsistence fishery during 2017 was 696 fish. Average harvest per permit holder during 2017 was 27 fish. Sockeye salmon are the target species, although some coho, pink, and chum salmon were also harvested. No Chinook salmon harvest was allowed in 2017 (Table 73).

Harvest in 2018 included Chinook salmon for the first time in the Yentna subsistence fishery. Sixteen fish were harvested and a total of 590 salmon other than Chinook salmon were harvested (Table 72).

The 2008–2018 average harvest for the Beluga personal use salmon fishery was 87 fish (Table 72). Sockeye and coho salmon make up the majority of the harvest (Table 72).

Chinook salmon dominate the harvest in the Tyonek subsistence fishery, with a smaller harvest of coho and sockeye salmon. Few pink and chum salmon are harvested. The number of permits issued in 2017 was 74, which was below the 1980–2017 average of 79 (Table 74). The total number of salmon harvested in 2017 was 2,045 of which 1,284 were Chinook (Table 74).

No eulachon were reported harvested in the KAMU for 2017. The 1985–2016 average harvest in the WSMU was 6,529 eulachon (Table 71). Inseason observations of run strength by staff in 2017 and 2018 indicated good runs. This fishery may be the most under-utilized personal use fishery in the Susitna River drainage.

## **EDUCATIONAL FISHERIES**

### **FISHERY DESCRIPTION**

The first educational fishery, the 1989 Kenaitze Tribal fishery (on the Kenai Peninsula), originated as a Federal Court-ordered subsistence fishery resulting from extensive legislation and litigation related to both state and federal interpretation of subsistence. Prior to the 1993 fishing season, the Alaska Superior Court, in negotiations with ADF&G and the Kenaitze Tribe, ordered ADF&G to issue educational fishing permits.

The Knik Tribal Council and the Native Village of Eklutna were first issued educational fishing permits for the 1994 season. These educational fisheries, originally ordered as interim fisheries until the court cases were decided, have been applied for and renewed by ADF&G annually. The Tyonek Subsistence Camp was issued permits from 1998 to 2000 and 2008–2010. Educational fishery permits were issued to the Big Lake Cultural Outreach Program from 2005 to 2018, and 1 permit was issued to the Intertribal Native Leadership group in 2006. The current educational fisheries are limited to certain areas and periods of operation as described in the following Fishery Management and Objectives section. In general, the Eklutna and Knik villages fish waters adjacent to their respective communities. Educational fishing also takes place along the north shores of Goose Bay and Point MacKenzie, and on Fire Island.

## **HISTORICAL HARVEST**

The total salmon harvest by the Knik Tribal Council educational fishery averaged 222 fish annually from 1994 to 2018 (Table 76). The Eklutna Native Village educational fishery harvested an average of 298 salmon annually during the same period, and Big Lake Cultural Outreach harvest averaged 90 salmon from 2005 to 2018 (Table 76).

## **FISHERY MANAGEMENT AND OBJECTIVES**

The objective of this fishery is to implement the provisions of the permit. Standards, general conditions, and requirements of an educational fishery program were established by the BOF and are administered under Chapter 93 of the Alaska Administrative Code (5 AAC 93.200–235). The open fishing season is from May 1 to September 30. The fishery can take place at the discretion of the permit holder except in the Fish Creek Terminal Harvest Area during commercial fishery openings and on Mondays or Thursdays when commercial openings are scheduled in the Northern District between Point MacKenzie and the Little Susitna River and adjacent to Fire Island. Otherwise, the fishery may be prosecuted in waters of the Northern District between Point Mackenzie and Little Susitna River and adjacent to Fire Island, and in waters within 1 mile of average high water on the western shore of Knik Arm from the Goose Bay airstrip beach access road boat launch located on the north shore of Goose Bay to Fish Creek. The educational fishery may not occur in the tidal channel of Fish Creek or in Fish Creek. Permits are issued on an annual basis and must be renewed each year. Permit holders must submit a postseason summary to ADF&G as indicated in the specifications. A failure to meet specifications will result in nonrenewal of a permit. Council and Tribal objectives for the educational fisheries include teaching and preserving the cultural and traditional subsistence way of life.

Reports on the educational program, as required by each permit, have been submitted annually to the NCIMA biologist and compiled in the Area Management Report. Educational fishery salmon harvests are minimal, and they do not affect inriver sport fisheries.

## **FISHERY PERFORMANCE AND ESCAPEMENT IN 2017 AND 2018**

The Knik Tribal Council educational fishery salmon harvest in 2017 was 99 fish. The majority of the 2017 harvest was 48 sockeye salmon followed by 22 coho salmon (Table 76). In 2018, they harvested 162 salmon, primarily sockeye salmon (100 fish) and coho salmon (50 fish; Table 76).

The educational fishery conducted by Eklutna Native Village harvested 192 fish in 2017: 128 sockeye, 31 chum, 24 coho, and 9 pink salmon. The season took place from July 1 to September 30 (Table 76). The 2018 harvest of 136 was similar with primarily sockeye (70 fish) and coho (48 fish) salmon (Table 76).

The Big Lake Cultural Outreach educational fishery fished in 2017 but not 2018. In 2017, they harvested 49 fish. (Table 76).

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## **TABLES**

Table 1.—Number of angler-days of sport fishing effort expended by sport anglers fishing Northern Cook Inlet Management Area waters, 1977–2017.

Year	Northern Cook Inlet Management Area										NCIMA total effort	Alaska total effort	NCIMA % of Alaska	Region II total effort <sup>b</sup>	NCIMA % of Region II
	Knik Arm		Eastside Susitna		Westside Susitna		West Cook Inlet <sup>a</sup>								
	Effort	%	Effort	%	Effort	%	Effort	%							
1977	81,949	48	56,651	33	29,211	17	2,735	2	170,546	1,198,486	14	828,351	21		
1978	75,540	38	86,010	43	35,709	18	2,262	1	199,521	1,285,063	16	913,417	22		
1979	78,411	38	78,222	38	48,362	23	2,012	1	207,007	1,364,739	15	1,014,018	20		
1980	102,530	42	91,277	38	46,768	19	1,357	1	241,932	1,488,962	16	1,072,384	23		
1981	105,052	52	59,854	30	35,072	17	2,263	1	202,241	1,420,172	14	1,016,731	20		
1982	91,713	41	80,745	36	50,738	23	1,126	1	224,322	1,623,090	14	1,131,358	20		
1983	138,389	50	67,471	24	63,919	23	6,237	2	276,016	1,732,528	16	1,212,680	23		
1984	130,727	46	81,758	29	61,263	22	7,512	3	281,260	1,866,837	15	1,341,658	21		
1985	122,626	43	67,764	24	77,092	27	16,455	6	283,937	1,943,069	15	1,406,419	20		
1986	131,606	40	92,289	28	87,736	27	13,537	4	325,168	2,071,412	16	1,518,712	21		
1987	140,167	44	77,817	24	84,448	26	16,247	5	318,679	2,152,886	15	1,556,050	20		
1988	183,029	46	107,977	27	95,339	24	11,875	3	398,220	2,311,291	17	1,679,939	24		
1989	146,912	41	96,864	27	96,308	27	14,851	4	354,935	2,264,079	16	1,583,381	22		
1990	142,884	41	101,917	29	92,435	26	14,392	4	351,628	2,453,284	14	1,745,110	20		
1991	146,605	39	113,178	30	104,072	28	13,336	4	377,191	2,456,328	15	1,782,055	21		
1992	141,825	35	149,484	37	101,496	25	11,000	3	403,805	2,540,374	16	1,889,930	21		
1993	118,214	32	128,382	35	106,724	29	17,993	5	371,313	2,559,408	15	1,867,233	20		
1994	143,372	38	114,533	30	106,112	28	15,950	4	379,967	2,719,911	14	1,966,985	19		
1995	126,154	42	102,686	34	60,177	20	12,557	4	301,574	2,787,670	11	1,985,539	15		
1996	90,990	40	83,227	36	42,717	19	12,146	5	229,080	2,006,528	11	1,434,943	16		
1997	95,730	39	85,228	35	50,366	21	11,218	5	242,542	2,079,514	12	1,400,983	17		
1998	78,218	35	89,014	40	44,931	20	10,019	5	222,182	1,856,976	12	1,258,482	18		
1999	112,642	34	133,310	40	74,374	22	14,402	4	334,728	2,499,152	13	1,659,966	20		
2000	121,601	33	141,609	38	88,503	24	18,483	5	370,196	2,627,805	14	1,844,824	20		

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Table 1.–Page 2 of 2.

Year	Northern Cook Inlet Management Area											NCIMA % of Region II	
	Knik Arm		Eastside Susitna		Westside Susitna		West Cook Inlet <sup>a</sup>		NCIMA total effort	Alaska total effort	NCIMA % of Alaska		Region II total effort <sup>b</sup>
	Effort	%	Effort	%	Effort	%	Effort	%					
2001	111,027	35	121,039	38	73,885	23	14,205	4	320,156	2,261,941	14	1,560,562	21
2002	126,194	39	116,254	36	63,286	20	16,335	5	322,069	2,259,091	14	1,569,513	21
2003	103,978	35	112,061	37	66,882	22	16,927	6	299,848	2,219,398	14	1,535,501	20
2004	113,528	36	107,689	35	72,721	23	17,809	6	311,747	2,473,961	13	1,709,671	18
2005	115,763	39	87,893	29	73,971	25	20,459	7	298,086	2,463,929	12	1,712,610	17
2006	119,795	41	85,029	29	73,700	25	15,771	5	294,295	2,297,961	13	1,605,852	18
2007	120,681	40	87,177	29	70,923	24	19,705	7	298,486	2,543,674	12	1,799,352	17
2008	136,572	48	85,755	30	47,061	16	16,627	6	286,015	2,315,601	12	1,622,920	18
2009	122,508	48	72,109	29	43,273	17	14,948	6	252,838	2,216,445	11	1,522,345	17
2010	106,281	46	63,025	27	48,298	21	14,512	6	232,116	2,000,167	12	1,371,492	17
2011	54,791	34	56,121	35	40,657	25	10,184	6	161,753	1,919,313	8	1,326,950	12
2012	58,673	37	50,521	32	40,255	25	10,682	7	160,131	1,885,786	8	1,252,263	13
2013	76,112	40	63,195	33	37,623	20	12,400	7	189,330	2,202,957	9	1,488,383	13
2014	97,254	45	63,308	30	41,596	19	12,192	6	214,350	2,309,853	9	1,571,650	14
2015	85,342	44	52,571	27	45,422	23	11,459	6	194,794	2,212,331	9	1,470,381	13
2016	82,553	44	56,195	30	35,497	19	11,702	6	185,947	1,982,300	9	1,314,668	14
	Mean	%	Mean	%	Mean	%	Mean	%	Mean	Mean	%	Mean	%
1977–2016	111,948	40	89,180	32	63,973	23	12,147	4	277,249	2,121,857	13	1,488,632	19
2007–2016	94,077	43	64,988	30	45,060	21	13,441	6	217,576	2,158,843	10	1,474,040	15
2012–2016	79,987	42	57,158	30	40,079	21	11,687	6	188,910	2,118,645	9	1,419,469	13
2017	73,463	47	45,090	29	30,850	20	7,967	6	157,370	2,006,244	8	1,312,586	12

Source: Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

<sup>a</sup> Data include saltwater effort from outside the North Cook Inlet Management Area, as reported in the Statewide Fishing Survey.

<sup>b</sup> ADF&G, Sport Fish Division, Southcentral Region (i.e., Region II) includes the following management areas: Anchorage Area, Bristol Bay, Kodiak–Aleutians, Lower Cook Inlet (Kenai), Northern Cook Inlet (Matanuska–Susitna Borough), Prince William Sound Area, Seward North Gulf Coast, and Upper Kenai Peninsula.

Table 2.—Angler-days of sport fishing effort for the Knik Arm Management Unit by fishery, 1977–2017.

Year	Marine	Little Susitna River	Knik River <sup>a</sup>	Eklutna Tailrace	Wasilla Creek	Cottonwood Creek	Big Lake drainage streams	Finger Lake	Kepler Lake complex	Big Lake	Nancy Lake complex	Other lakes <sup>b</sup>	Other streams	Total
1977		11,063			2,805			14,864	7,962	11,869	7,259	26,127		81,949
1978		12,127			3,446			11,502	5,730	9,865	7,647	25,223		75,540
1979		21,301			4,024	5,345		4,433	5,439	8,300	7,011	22,558		78,411
1980		22,420			5,726	9,268		6,483	8,597	12,195	9,153	28,688		102,530
1981		26,162	4,904		4,019	8,663		5,267	8,227	14,568	8,488	24,754		105,052
1982		24,020	6,653		6,261	5,186		3,514	6,943	15,371	8,615	15,150		91,713
1983	17,127	35,477	9,183		3,239	5,944		8,512	9,149	15,989	10,907	19,571	3,291	138,389
1984	4,316	48,517	9,369	3,413	3,547	7,144		6,843	9,770	12,916	7,194	15,892	1,806	130,727
1985	692	41,643	8,970	2,995	3,115	4,560	903	4,259	9,226	16,299	5,960	22,243	1,761	122,626
1986	983	45,770	13,015	8,549	3,387	5,653	2,641	5,589	9,544	14,559	6,520	13,147	2,249	131,606
1987	1,974	35,659	6,990	11,663	2,173	2,934	2,898	10,830	14,379	17,693	15,125	16,187	1,662	140,167
1988	1,239	49,731	23,229	13,188	2,228	4,056	3,110	8,240	18,245	10,077	12,099	35,159	2,428	183,029
1989	2,352	54,798	11,141	10,342	2,406	3,069	4,204	4,840	12,821	12,748	8,349	19,024	818	146,912
1990	2,494	40,159	17,878	7,618	2,679	3,056	3,936	6,737	13,644	11,798	9,973	19,949	2,963	142,884
1991	3,147	50,838	13,736	5,892	2,893	1,623	3,693	5,998	11,337	13,759	10,239	20,043	3,407	146,605
1992	1,540	49,304	8,856	4,279	1,110	1,974	4,534	5,506	15,556	11,545	12,299	24,723	599	141,825
1993	2,116	42,249	6,824	4,523	1,774	3,077	2,976	7,843	7,461	8,446	9,393	20,606	926	118,214
1994	1,244	45,149	9,658	8,974	2,226	3,230	3,496	9,434	11,832	9,987	10,197	25,063	2,882	143,372
1995	940	41,119	10,893	11,453	1,373	2,598	2,256	7,814	10,885	6,979	9,723	18,928	1,193	126,154
1996	966	24,575	7,561	6,448	1,386	1,783	934	8,962	7,431	7,290	5,140	17,464	1,050	90,990
1997	672	27,883	5,349	3,835	1,188	2,070	1,104	7,242	8,139	9,644	7,275	19,944	1,385	95,730
1998	952	22,108	5,272	5,100	1,171	3,454	2,256	4,286	6,500	6,143	4,861	15,729	386	78,218
1999	250	30,437	6,860	6,150	990	3,506	2,182	8,076	9,149	8,418	7,899	26,981	1,744	112,642
2000	447	39,556	10,975	7,938	328	1,265	1,408	7,786	8,708	7,587	8,670	25,519	1,414	121,601
2001	622	33,521	13,028	10,166	419	2,627	1,670	6,902	8,439	5,555	6,789	20,831	458	111,027
2002	1,218	40,346	17,989	11,767	1,037	1,534	2,776	7,094	6,108	5,176	5,659	24,612	878	126,194
2003	435	31,993	13,474	8,423	757	2,238	1,182	5,096	6,470	5,226	6,653	21,267	764	103,978
2004	184	33,819	19,342	9,588	1,079	3,282	2,029	4,713	6,958	4,430	5,501	21,954	649	113,528
2005	802	27,490	19,605	19,339	684	1,484	1,461	5,514	4,719	6,481	4,391	22,989	804	115,763

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Table 2.—Page 2 of 2.

Year	Marine	Little Susitna River	Knik River <sup>a</sup>	Eklutna Tailrace	Wasilla Creek	Cotton -wood Creek	Big Lake drainage streams	Finger Lake	Kepler Lake complex	Big Lake	Nancy Lake complex	Other lakes <sup>b</sup>	Other streams	Total
2006	323	28,547	25,271	20,465	869	3,867	948	6,055	5,684	5,616	7,279	14,225	646	119,795
2007	590	35,636	21,342	22,619	1,194	3,448	907	3,229	3,926	5,261	5,053	16,087	1,389	120,681
2008	325	31,989	27,874	20,586	1,394	2,718	1,343	7,715	8,264	7,326	4,958	21,426	654	136,572
2009	159	28,151	23,925	22,625	1,619	2,679	2,092	6,821	6,881	3,415	6,081	17,395	665	122,508
2010	124	24,846	16,140	14,708	2,354	2,064	2,966	4,821	5,594	4,369	8,736	18,867	692	106,281
2011	139	12,779	9,810	5,972	1,300	1,736	970	4,338	5,899	3,080	4,377	3,633	758	54,791
2012	<sup>c</sup>	10,115	7,474	5,475	506	884	1,343	2,439	3,161	4,151	3,096	19,596	433	58,673
2013	<sup>c</sup>	12,012	8,474	8,370	1,569	901	1,033	6,118	7,594	4,030	6,014	19,252	745	76,112
2014	<sup>c</sup>	13,636	9,376	13,443	1,258	1,522	2,095	8,176	12,066	7,349	4,616	22,702	1,015	97,254
2015	<sup>c</sup>	17,845	5,746	13,968	1,467	2,645	2,587	4,750	4,209	6,077	2,638	22,533	877	85,342
2016	<sup>c</sup>	16,168	5,406	16,007	548	3,471	1,598	5,162	8,194	2,608	3,511	19,240	640	82,553
Mean														
1977–2016	1,668	31,024	12,266	10,481	2,039	3,330	2,173	6,595	8,521	8,855	7,384	20,632	1,295	111,948
2007–2016	267	20,318	13,557	14,377	1,321	2,207	1,693	5,357	6,579	4,767	4,908	18,073	787	94,077
2012–2016	–	13,955	7,295	11,453	1,070	1,885	1,731	5,329	7,045	4,843	3,975	20,665	742	79,987
2017	32	11,376	3,299	12,300	954	3,043	1,250	5,337	4,847	4,578	2,404	21,969	2,074	73,463

Source: Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: Blank cells indicate no data.

<sup>a</sup> Knik River and tributaries including Jim Creek.

<sup>b</sup> Includes effort for lakes and streams, 1977–1982.

<sup>c</sup> No data.

Table 3.—Angler-days of sport fishing effort for the Eastside Susitna River Management Unit by fishery, 1977–2017.

Year	Willow Creek	Little Willow	Kashwitna River	Caswell Creek	Sheep Creek	Goose Creek	Montana Creek	Birch Creek	Sunshine Creek	Talkeetna River <sup>a</sup>	Other streams <sup>b</sup>	Lakes	Total
1977	14,024	4,583			8,112		14,268			3,163		12,501	56,651
1978	22,682	5,687			11,869		25,762			5,040		14,970	86,010
1979	18,911	5,171		3,710	6,728		22,621		3,317	5,125		12,639	78,222
1980	29,011	8,190		4,963	8,014		19,287		5,208	4,388		12,216	91,277
1981	14,060	3,845		3,860	6,936		16,657		3,062	3,584		7,850	59,854
1982	19,704	5,579		5,101	9,093		23,645		3,787	3,856		9,980	80,745
1983	13,405	2,791	1,344	5,048	6,237		17,109		3,429	7,564	5,460	5,084	67,471
1984	21,649	5,872	2,995	4,952	6,106	1,305	19,239		3,229	9,252	4,417	2,742	81,758
1985	16,282	5,705		5,289	2,844		20,028		4,144	7,213	4,162	2,097	67,764
1986	10,733	4,490	2,908	4,362	10,091	1,993	20,268	2,010	8,124	8,638	10,566	8,106	92,289
1987	13,583	5,850	2,717	3,332	9,019	1,865	13,745	2,046	3,912	17,096	2,101	2,551	77,817
1988	27,758	10,768	1,454	4,529	18,699	2,947	16,498	2,074	4,129	12,733	3,648	2,740	107,977
1989	23,811	5,285	6,320	4,029	13,010	3,058	16,179	767	4,592	15,218	1,907	2,688	96,864
1990	32,200	6,505	2,313	6,103	11,392	3,714	11,284		4,485	18,299	3,287	2,335	101,917
1991	32,520	7,792	1,981	7,816	14,872	2,811	10,745	1,056	5,788	18,466	6,172	3,159	113,178
1992	50,958	9,240	2,177	6,391	17,509	4,908	18,437	1,366	4,833	21,478	6,347	5,840	149,484
1993	41,218	6,422	1,600	5,033	12,636	3,423	21,615	655	4,094	22,580	5,161	3,945	128,382
1994	34,362	6,744	1,957	5,842	11,526	3,300	16,220	1,092	4,265	18,642	6,134	4,449	114,533
1995	29,392	6,386	1,460	3,912	9,758	1,993	16,303	826	2,756	19,358	6,019	4,523	102,686
1996	23,508	5,890	1,140	1,473	8,112	1,796	13,485	506	3,028	18,386	2,907	2,996	83,227
1997	21,511	5,829	1,916	1,317	9,172	3,151	14,111	525	1,585	18,133	3,765	4,213	85,228
1998	23,920	4,987	1,663	2,983	9,716	2,510	14,952	1,063	2,374	16,713	5,130	3,003	89,014
1999	37,384	8,596	2,004	2,764	17,188	3,561	22,382	1,226	3,805	21,988	7,299	5,113	133,310
2000	44,648	9,028	2,331	4,385	12,660	3,266	26,070	1,426	5,487	21,324	5,744	5,240	141,609

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Table 3.–Page 2 of 2.

Year	Willow Creek	Little Willow	Kashwitna River	Caswell Creek	Sheep Creek	Goose Creek	Montana Creek	Birch Creek	Sunshine Creek	Talkeetna River <sup>a</sup>	Other streams <sup>b</sup>	Lakes	Total
2001	34,979	7,059	2,320	2,637	11,742	2,339	22,454	1,065	1,955	21,590	8,440	4,459	121,039
2002	31,997	7,189	2,648	2,562	12,853	2,845	22,008	446	3,192	21,548	4,870	4,096	116,254
2003	29,668	4,815	5,028	3,018	12,878	2,965	20,794	666	3,616	19,335	4,387	4,891	112,061
2004	26,722	5,031	1,906	902	10,310	2,645	22,860	881	2,820	19,632	8,161	5,819	107,689
2005	24,181	6,566	1,626	2,395	8,521	2,039	16,083	1,356	4,089	16,172	1,902	2,963	87,893
2006	21,927	4,536	2,489	1,767	9,437	2,593	19,657	779	3,732	13,043	2,800	2,269	85,029
2007	22,139	7,126	1,099	1,260	10,156	621	18,111	414	3,098	18,025	2,947	2,181	87,177
2008	17,953	8,213	5,634	1,524	8,574	1,895	16,174	964	4,153	14,392	2,687	3,592	85,755
2009	19,019	4,105	3,897	1,859	9,248	1,640	14,084	698	1,749	10,669	2,322	2,819	72,109
2010	12,487	3,562	1,614	2,524	7,042	1,051	10,931	1,025	2,009	11,952	3,782	5,046	63,025
2011	10,949	1,282	3,444	822	5,868	717	8,644	578	1,314	11,212	8,530	2,761	56,121
2012	9,763	1,609	704	546	3,877	994	9,303	1,230	1,337	11,502	6,738	2,918	50,521
2013	12,337	2,668	1,345	774	5,268	674	12,089	865	1,141	11,471	10,968	3,595	63,195
2014	13,687	4,286	2,615	919	4,887	3,672	9,381	1,057	2,606	7,571	9,396	3,231	63,308
2015	12,068	1,934	1,157	380	3,885	733	10,291	149	1,327	10,693	5,714	4,240	52,571
2016	11,968	3,742	1,017	1,333	4,060	1,686	7,280	173	1,187	8,879	11,010	3,860	56,195
Mean													
1977–2016	23,227	5,624	2,328	3,221	9,498	2,335	16,776	966	3,388	13,648	5,438	4,993	89,180
2007–2016	14,237	3,853	2,253	1,194	6,287	1,368	11,629	715	1,992	11,637	6,409	3,424	64,998
2012–2016	11,965	2,848	1,368	790	4,395	1,552	9,669	695	1,520	10,023	8,765	3,569	57,158
2017	10,943	1,527	854	374	3,392	339	8,242	95	1,724	7,520	7,078	3,002	45,090

Source: Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited Decemer 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: Blank cells indicate no data.

<sup>a</sup> Including Clear Creek.

<sup>b</sup> Includes angler days from the Susitna River.

Table 4.—Angler-days of sport fishing effort for the Westside Susitna River Management Unit by fishery, 1977–2017.

Year	Alex- ander Creek	Deshka River	Rabi- deux Creek	Moose Creek	Yentna River	Peters Creek	Lake Creek	Fish Creek <sup>a</sup>	Tala- chulitna River	Judd Lake	Shell Lake	Whiskey Lake	Hewitt Lake	Other streams <sup>b</sup>	Other lakes <sup>b</sup>	Total
1977	5,991	3,852					6,946		1,342	317	566	287	436	7,269	2,205	29,211
1978	6,914	9,111					8,767		732	151	302	129	172	6,011	3,420	35,709
1979	8,284	13,236					13,881		2,185	519	263	189	613	7,577	1,615	48,362
1980	6,812	19,364					8,325		2,542	814	414	29	471	4,998	2,999	46,768
1981	6,892	13,248					6,471		1,378					4,963	2,120	35,072
1982	10,748	18,391					8,649		1,911		444	171		7,012	3,412	50,738
1983	9,425	23,174					14,749		4,566	155	913			6,284	4,653	63,919
1984	7,261	20,561				786	14,739		3,848	1,255				9,652	3,161	61,263
1985	12,884	29,322					14,323		1,682					13,159	5,722	77,092
1986	19,113	29,739		1,193			15,626	3,838	2,186	963				13,753	1,325	87,736
1987	13,220	30,008					16,842	6,918	3,242	2,698				9,571	1,949	84,448
1988	19,591	32,160				2,001	16,007	5,784	8,040	588				8,047	3,121	95,339
1989	14,651	39,432	550	345	656	914	14,061	8,035	8,698	400				5,565	3,001	96,308
1990	19,863	32,082	1,024		849	1,318	17,914	4,857	5,184					5,430	3,914	92,435
1991	26,235	38,011	459		1,003	2,466	14,726	3,820	6,589	544				6,560	3,659	104,072
1992	18,085	37,056	992		1,985	2,198	16,869	3,873	5,153				800	9,586	4,899	101,496
1993	21,660	30,643			2,110	1,263	26,113	6,454	5,613					10,587	2,281	106,724
1994	25,608	19,267			3,936	1,195	27,958	7,011	7,292					10,113	3,732	106,112
1995	10,648	4,808			2,728	1,465	15,808	4,729	6,354					10,790	2,847	60,177
1996	6,062	5,246			1,293	981	12,091	2,158	5,151					9,735		42,717
1997	7,514	5,110			1,760	606	16,033	3,028	5,651					10,664		50,366
1998	6,538	11,574			889		11,260	2,618	3,224					8,828		44,931
1999	11,187	20,088			3,259	536	17,991	5,107	7,680					8,526		74,374
2000	11,733	30,997			5,474	1,057	21,671	3,850	6,415					7,306		88,503

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Table 4.–Page 2 of 2.

Year	Alex- ander Creek	Deshka River	Rabi- deux Creek	Moose Creek	Yentna River	Peters Creek	Lake Creek	Fish Creek <sup>a</sup>	Tala- chulitna River	Judd Lake	Shell Lake	Whis- key Lake	Hewitt Lake	Other streams <sup>b</sup>	Other lakes <sup>b</sup>	Total
2001	9,360	23,734	417		5,035	396	20,559	4,026	5,813					4,429	116	73,885
2002	10,169	20,362	737		4,091	853	14,933	3,672	3,995					4,010	464	63,286
2003	6,855	24,904	520		1,866	681	19,857	3,320	4,391					3,614	874	66,882
2004	5,679	28,653	894	355	3,319	606	20,898	3,594	3,631	344	744		110	626	3,268	72,721
2005	3,907	26,638	365	19	5,524	961	21,844	3,438	4,740		1,082		539	3,720	1,194	73,971
2006	4,337	31,015	727	271	6,679	620	19,801	2,084	4,455	52		53	112	2,530	964	73,700
2007	2,666	34,659	289	67	5,647	1,779	13,486	981	6,704	107	663		74	2,298	1,503	70,923
2008	299	15,514	774	0	4,778	756	11,891	1,212	5,310	441	194	0	34	1,733	4,125	47,061
2009	2,660	10,532	586	283	3,860	1,358	12,693	1,169	3,855	18	200	0	198	1,432	4,429	43,273
2010	481	17,520	752	347	4,693	880	10,674	878	3,460	140	1,432	22	151	3,485	3,383	48,298
2011	931	13,206	386	122	4,511	851	11,520	92	2,482	105	601	0	50	3,669	2,131	40,657
2012	560	10,987	641	63	4,580	234	9,129	1,240	4,305	73	63	218	146	5,681	2,335	40,255
2013	1,180	9,673	<sup>c</sup>	642	3,179	519	13,101	752	2,945	206	251	581	272	2,076	2,246	37,623
2014	3,119	10,947	749	749	2,962	775	10,294	959	3,120	467	0	609	399	3,216	3,231	41,596
2015	1,109	11,296	745	28	4,330	907	11,657	1,542	5,409	90	76	56	52	3,885	4,240	45,422
2016	418	12,742	<sup>c</sup>	549	3,218	895	10,171	899	2,011	591	417	28	78	1,553	1,927	35,497
Mean																
1977–2016	9,016	20,472	645	336	3,365	1,030	14,758	3,288	4,332	480	479	158	262	6,249	2,756	63,973
2007–2016	1,342	14,708	615	285	4,176	895	11,462	972	3,960	224	390	168	145	2,903	2,955	45,060
2012–2016	1,277	11,129	712	406	3,654	666	10,870	1,078	3,558	285	161	298	189	3,282	2,796	40,079
2017	1,168	10,748	604	71	3,409	839	6,183	559	2,302	63	181	0	36	3,170	1,517	30,850

Source: Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: Blank cells indicate no data.

<sup>a</sup> Fish Lake drainage (Yentna River drainage).

<sup>b</sup> May include effort from West Cook Inlet drainage waters.

<sup>c</sup> No data.

Table 5.—Angler-days of sport fishing effort for the West Cook Inlet Management Unit by fishery, 1977–2017.

Year	Chuitna River	Beluga River	Theodore River	Lewis River	Kustatan River	Polly Creek	Susitna River-N. Foreland	South of North Foreland	Big River Lakes <sup>a</sup>	Polly Creek, Crescent R. Beach	Other	Total
1977	1,355		1,037	343								2,735
1978	1,185		905	172								2,262
1979	1,069		912	31								2,012
1980	614		700	43								1,357
1981	1,364		899									2,263
1982	751		375									1,126
1983	4,290		448		1,499							6,237
1984	2,342		3,497		1,673							7,512
1985	3,381		5,601	1,023	4,335					2,115		16,455
1986	3,532		4,786		2,737					2,482		13,537
1987	3,169		6,194	1,231	3,622					2,031		16,247
1988	1,637		4,056	837	3,674					1,671		11,875
1989	2,666	866	4,113	1,114	3,522				370	962	1,238	14,851
1990	4,443		3,626	1,285	3,724					1,314		14,392
1991	2,454		2,841	496	6,674					871		13,336
1992	2,817	512	2,091		4,150	747				683		11,000
1993	2,966		2,528	400	5,403			2,379	535	1,117	2,665	17,993
1994	2,236		3,492		3,972			1,283	653	604	3,710	15,950
1995	2,205		2,425		3,684	688		845	659	617	1,434	12,557
1996	2,505		1,811		2,699	342	1,075	855	1,251	541	1,067	12,146
1997	2,210		521		2,684		1,738	882	976	572	1,635	11,218
1998	3,221		280		2,749		1,139	862	729	329	710	10,019
1999	2,440		488		3,234		2,333	2,623	1,341	677	1,266	14,402
2000	4,104		1,452		4,393		2,593	2,450	2,504	987		18,483

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Table 5.—Page 2 of 2.

Year	Chuitna River	Beluga River	Theodore River	Lewis River	Kustatan River	Polly Creek	Susitna River-N. Foreland	South of North Foreland	Big River Lakes <sup>a</sup>	Polly Creek, Crescent R. Beach	Other	Total
2001	3,580		1,347		3,336		2,027	2,615	902	398		14,205
2002	2,864		1,450	237	5,254		2,340	1,686	678	499	1,327	16,335
2003	2,422		618	310	3,915		945	2,517	3,497	386	2,317	16,927
2004	2,165	777	828	428	2,854	233	2,135	1,482	3,322	608	2,977	17,809
2005	2,053	233	669	310	2,649		2,423	1,194	5,365	2,000	3,563	20,459
2006	1,279	1040	337	228	2,515	78	3,155	1,955	4,957		227	15,771
2007	3,745	742	749	238	3,517	56	1,381	1,582	2,203	192	5,300	19,705
2008	1,805	499	525	222	3,416	359	580	1,857	2,837	201	4,326	16,627
2009	1,354	383	952	485	2,238	161	2,823	1,599	3,829	446	678	14,948
2010	441	656	595	340	2,152	92	1,710	2,048	4,859	644	975	14,512
2011	515	364	435	376	1,215	30	455	977	2,452	126	3,239	10,184
2012	549	349	117	18	1,949	44	641	1,277	3,908	125	1,705	10,682
2013	369	167	322	54	2,485	20	659	3,062	2,931	186	2,145	12,400
2014	439	266	185	27	1,497	112	1,942	3,076	3,949	276	423	12,192
2015	352	439	454	97	2,468	283	1,182	2,208	3,462	471	43	11,459
2016	44	22	1,169	209	1,519	104	2,875	1,812	2,914	618	416	11,702
Average												
1977–2016	2,073	488	1,646	406	3,159	223	1,721	1,797	2,443	798	1,886	12,147
2007–2016	961	389	550	207	2,246	126	1,425	1,950	3,334	329	1,925	13,441
2012–2016	351	249	449	81	1,984	113	1,460	2,287	3,433	335	946	11,687
2017	659	82	126	0	1,149	0	346	1,211	3,669	0	725	7,967

Source: 1977–2005 Statewide Harvest Survey estimates from Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>. 2006 SWHS estimates from ADF&G, Division of Sport Fish, Research and Technical Services, Anchorage. Unpublished ADF&G database of survey estimates accessed 7/24/2008; project leader Gretchen Jennings.

Note: Blank cells indicate no data.

<sup>a</sup> Big River Lakes encompasses Big River drainage, including Wolverine Creek.

Table 6.—Northern Cook Inlet Management Area sport harvest by management unit, 1977–2017.

Year	Northern Cook Inlet Management Area									Alaska total harvest	NCIMA % of Alaska total	Region II total harvest	NCIMA % of Region II total
	Knik Arm		Eastside Susitna		Westside Susitna		West Cook Inlet		NCIMA total harvest				
	Harvest	%	Harvest	%	Harvest	%	Harvest	%					
1977	67,979	43	49,274	31	36,096	23	3,510	2	156,859	2,300,332	7	1,929,407	8
1978	66,419	31	96,469	46	45,208	21	3,070	1	211,166	2,399,472	9	1,992,212	11
1979	68,658	41	50,476	30	46,939	28	2,453	1	168,526	2,502,213	7	2,044,813	8
1980	102,015	41	93,271	38	50,474	20	1,798	1	247,558	2,627,312	9	2,118,543	12
1981	109,824	57	46,558	24	32,153	17	3,631	2	192,166	2,528,056	8	2,052,719	9
1982	82,976	44	58,998	31	46,189	24	1,814	1	189,977	2,828,706	7	2,222,354	9
1983	92,689	50	45,330	24	41,855	23	5,596	3	185,470	3,086,280	6	2,409,876	8
1984	94,974	45	62,071	29	48,947	23	6,145	3	212,137	3,115,966	7	2,517,185	8
1985	104,136	51	39,684	20	47,868	24	10,853	5	202,541	3,096,044	7	2,469,836	8
1986	90,264	39	73,083	32	59,300	26	8,031	3	230,678	3,163,433	7	2,609,304	9
1987	98,373	46	47,548	22	57,252	27	11,400	5	214,573	3,207,138	7	2,584,420	8
1988	156,784	53	62,693	21	67,567	23	10,954	4	297,998	3,483,306	9	2,841,033	10
1989	115,070	49	51,426	22	55,361	24	11,592	5	233,449	3,213,867	7	2,519,404	9
1990	90,035	46	44,360	23	52,846	27	9,713	5	196,954	3,033,301	6	2,428,172	8
1991	103,384	44	51,068	22	66,514	29	11,492	5	232,458	3,311,513	7	2,633,148	9
1992	88,267	37	76,569	32	62,768	26	9,275	4	236,879	3,234,048	7	2,675,940	9
1993	90,017	39	67,907	30	55,215	24	15,384	7	228,523	2,989,720	8	2,387,224	10
1994	87,547	44	51,984	26	47,891	24	13,583	7	201,005	3,349,821	6	2,689,718	7
1995	57,182	39	42,845	29	37,688	25	10,741	7	148,456	2,909,979	5	2,396,666	6
1996	88,461	45	53,672	27	35,940	18	17,522	9	195,595	3,336,773	6	2,733,663	7
1997	69,199	45	37,909	24	36,110	23	11,755	8	154,973	3,294,273	5	2,643,988	6
1998	64,060	38	51,514	30	40,329	24	14,604	9	170,507	3,163,194	5	2,365,536	7
1999	70,384	32	66,153	30	70,806	32	15,120	7	222,463	3,093,608	7	2,163,862	10
2000	102,831	40	75,496	29	61,252	24	19,202	7	258,781	3,338,071	8	2,547,294	10

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Table 6.–Page 2 of 2.

Year	Northern Cook Inlet Management Area									Alaska total harvest	NCIMA % of Alaska total	Region II total harvest	NCIMA % of Region II total
	Knik Arm		Eastside Susitna		Westside Susitna		West Cook Inlet		NCIMA total harvest				
	Harvest	%	Harvest	%	Harvest	%	Harvest	%					
2001	79,920	37	59,205	27	57,173	26	19,582	9	215,880	3,078,100	7	2,228,839	10
2002	102,112	48	53,912	25	40,031	19	17,752	8	213,807	3,216,432	7	2,401,826	9
2003	68,332	37	41,764	23	52,462	29	21,416	12	183,974	3,052,136	6	2,177,555	8
2004	77,563	38	42,991	21	61,552	30	21,884	11	203,990	3,332,948	6	2,350,240	9
2005	67,036	40	35,066	21	49,444	29	17,936	11	169,482	3,235,176	5	2,173,207	8
2006	77,054	42	40,043	22	45,933	25	18,662	10	181,692	2,709,406	7	1,942,870	9
2007	60,293	40	30,763	21	35,021	23	23,537	16	149,614	3,032,493	5	2,123,212	7
2008	69,881	42	40,009	24	32,918	20	21,827	13	164,635	2,976,610	6	2,169,154	8
2009	63,310	45	34,813	25	27,325	19	16,304	12	141,752	2,951,263	5	2,139,793	7
2010	53,326	40	27,957	21	34,140	26	16,249	12	131,672	2,566,595	5	1,900,591	7
2011	32,385	33	22,198	23	32,589	33	10,989	11	98,161	2,677,077	4	1,979,899	5
2012	24,480	32	17,464	23	22,121	29	13,263	17	77,328	2,470,395	3	1,771,727	4
2013	37,650	34	25,630	23	32,577	30	13,281	12	109,138	2,941,908	4	1,972,619	6
2014	42,986	37	22,739	20	34,517	30	14,632	13	114,874	2,484,880	5	1,558,917	7
2015	45,474	38	24,448	20	31,373	26	18,980	16	120,275	2,484,880	5	1,558,917	8
2016	32,934	40	18,746	23	18,742	23	12,725	15	83,147	2,229,488	4	1,381,273	6
Mean	Mean	%	Mean	%	Mean	%	Mean	%	Mean	Mean	%	Mean	%
1977–2016	77,407	42	48,353	26	45,262	25	12,706	7	183,728	2,951,155	6	2,245,174	8
2012–2016	36,705	36	21,805	22	27,866	28	14,576	14	100,952	2,522,310	4	1,648,691	6
2017	25,628	32	22,016	27	22,619	28	11,080	14	81,343	2,229,488	4	1,381,273	6

Source: Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Table 7.—Northern Cook Inlet Management Area sport fish harvest by species, 1977–2017.

Year	Salmon						Rain- bow trout	Dolly Varden	Arctic grayling	Lake trout	Burbot	Nor- thern pike	White- fish	Smelt	Other	Total
	Chinook	Coho	Sock- eye	Pink	Chum	Land- locked										
1977	4,674	17,206	7,962	30,136	2,062	27,429	32,270	13,365	15,799	3,231	1,024	132	0	0	1,569	156,859
1978	3,543	27,019	3,140	58,808	17,969	21,252	42,087	17,130	15,728	1,980	876	316	0	0	1,318	211,166
1979	7,964	24,076	6,193	13,925	5,599	12,144	47,924	17,718	27,949	1,789	1,172	382	0	0	1,691	168,526
1980	8,198	39,167	7,658	61,985	5,577	21,163	49,428	18,255	29,720	2,833	1,383	232	0	0	1,959	247,558
1981	8,602	23,621	8,369	9,627	4,820	24,533	63,592	20,310	24,506	2,375	518	125	0	0	1,168	192,166
1982	12,449	35,246	9,067	19,045	8,111	11,841	49,948	19,723	19,196	1,560	1,656	607	0	0	1,528	189,977
1983	14,860	17,477	21,533	5,686	6,032	23,854	46,184	20,362	21,332	3,532	2,305	944	0	0	1,369	185,470
1984	20,424	49,537	15,609	14,763	8,115	15,428	42,901	14,440	21,148	2,843	2,778	1,821	1,058	0	1,272	212,137
1985	21,904	38,971	9,840	4,018	3,053	15,345	63,319	18,626	18,554	622	1,855	1,404	2,477	2,240	313	202,541
1986	25,873	45,890	14,203	15,992	9,354	16,405	42,642	20,268	20,109	2,286	2,899	1,977	2,105	10,651	24	230,678
1987	25,906	54,109	13,530	4,634	6,358	15,032	39,909	16,421	16,405	2,046	5,140	2,464	2,861	9,265	493	214,573
1988	29,720	83,241	14,573	8,693	13,408	17,207	74,962	17,645	18,735	2,529	1,835	3,473	3,128	8,849	0	297,998
1989	35,792	66,833	14,403	5,191	9,043	11,577	54,962	12,860	12,238	2,397	978	3,120	1,716	2,324	15	233,449
1990	30,967	50,404	11,839	6,005	2,557	16,101	40,139	13,792	8,187	1,656	3,141	2,842	3,516	5,591	217	196,954
1991	33,958	70,425	11,713	3,495	3,240	15,754	52,513	13,859	10,084	1,527	981	6,640	2,057	6,132	80	232,458
1992	45,226	82,859	11,921	8,225	2,858	11,961	34,161	7,496	6,385	1,698	1,412	5,382	862	15,523	910	236,879
1993	49,387	87,606	14,579	4,827	2,536	14,567	27,950	5,978	5,175	765	1,655	5,721	878	6,596	303	228,523
1994	31,104	73,017	12,479	3,878	2,937	14,198	28,855	5,163	8,044	411	2,276	3,893	1,193	13,135	422	201,005
1995	16,537	65,145	11,441	3,081	7,967	7,318	19,884	4,167	3,199	456	858	3,546	227	4,549	81	148,456
1996	19,839	77,853	11,048	5,430	4,841	23,350	26,653	9,096	5,724	471	898	7,934	176	2,181	101	195,595
1997	22,620	35,685	15,229	3,620	4,267	11,721	30,089	6,594	4,425	520	1,874	9,024	214	8,853	238	154,973
1998	22,912	68,231	16,343	7,889	3,451	5,377	19,931	3,736	3,752	338	1,358	8,180	566	8,376	67	170,507
1999	32,803	65,055	16,535	3,819	4,222	9,377	28,425	5,906	4,135	402	1,271	10,824	134	39,555	0	222,463
2000	33,102	105,252	23,235	14,627	5,166	12,064	31,703	6,116	2,923	385	2,177	9,577	311	11,827	316	258,781

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Table 7.–Page 2 of 2.

Year	Salmon						Rain- bow trout	Dolly Varden	Arctic gray- ling	Lake trout	Burbot	Nor- thern pike	White- fish	Smelt	Other	Total
	Chinook	Coho	Sock- eye	Pink	Chum	Land- locked										
2001	30,395	89,893	20,565	5,229	5,026	7,556	23,202	4,560	2,864	439	689	12,739	797	11,630	296	215,880
2002	26,474	99,155	11,946	5,177	5,461	9,137	31,521	4,150	2,532	643	1,371	12,318	331	3,298	293	213,807
2003	28,220	73,479	22,708	2,276	4,402	5,905	21,887	4,375	1,942	858	1,346	8,024	283	7,498	771	183,974
2004	27,543	88,746	16,936	6,629	3,959	5,940	21,468	3,965	2,148	734	729	12,171	327	12,573	122	203,990
2005	28,682	75,309	11,381	3,460	3,364	6,685	15,695	2,999	1,119	404	1,357	11,306	807	3,068	3,846	169,482
2006	28,644	95,086	11,653	5,009	2,227	3,688	16,311	2,486	2,134	157	1,082	11,404	330	71	1,410	181,692
2007	25,413	67,842	19,864	3,069	1,749	1,754	12,288	4,927	1,756	643	911	8,156	449	744	49	149,614
2008	15,919	90,006	16,750	2,499	2,233	2,198	17,908	3,030	1,571	453	1,715	7,999	364	1,832	158	164,635
2009	11,156	76,871	19,712	5,942	2,557	1,321	9,547	2,467	2,124	244	303	8,488	66	880	74	141,752
2010	10,510	65,935	16,281	3,142	2,460	2,084	13,194	2,570	1,958	316	658	9,913	141	2,510	0	131,672
2011	9,712	36,299	13,873	2,015	2,880	842	10,729	1,989	804	564	308	11,089	112	6,763	182	98,161
2012	3,020	29,890	13,046	1,880	3,178	2,835	9,198	1,445	729	173	454	7,815	83	3,290	292	77,328
2013	2,940	46,064	17,112	3,391	1,979	1,850	10,911	2,142	1,502	199	580	18,764	0	1,704	0	109,138
2014	3,205	48,934	15,132	2,599	3,421	4,126	11,350	3,342	9,377	110	989	9,708	91	2,426	64	114,874
2015	5,627	59,883	13,119	3,123	3,039	679	11,288	2,087	1,568	282	969	17,465	34	1,015	97	120,275
2016	7,176	23,979	20,117	2,593	1,514	946	12,194	1,438	708	465	579	11,369	48	0	21	83,147
Mean																
1977–2016	20,575	59,282	14,066	9,386	4,825	10,814	30,978	8,925	8,957	1,133	1,409	6,732	694	5,374	578	183,728
2012–2016	4,394	41,750	15,705	2,717	2,626	2,087	10,988	2,091	2,777	246	714	13,024	51	1,687	95	100,952
% of mean																
1977–2016	11	32	8	5	3	6	17	5	5	1	1	4	<1	3	<1	100
2017	3,493	34,657	12,316	2,856	2,994	2,433	10,554	1,197	653	14	379	9,094	0	650	53	81,343

Source: Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Table 8.—Knik Arm Management Unit sport fish harvest by species as estimated by SWHS, 1977–2017.

Year	Salmon						Rain- bow trout	Dolly Varden	Arctic gray- ling	Lake trout	Burbot	Nor- thern pike	White- fish	Smelt	Other	Total
	Chinook	Coho	Sock- eye	Pink	Chum	Land- locked										
1977	207	4,366	1,576	1,661	250	26,917	18,615	7,541	3,916	2,260	290				380	67,979
1978	140	7,895	1,239	1,842	1,131	18,884	23,139	7,982	2,413	507	452				795	66,419
1979	800	7,139	3,616	818	654	11,853	24,843	8,582	8,371	1,254	291				437	68,658
1980	646	16,030	5,674	4,701	534	19,500	29,368	12,484	9,514	2,118	310				1,136	102,015
1981	1,466	10,484	6,080	834	431	24,255	41,749	14,475	7,396	1,791	87				776	109,824
1982	1,666	13,676	4,621	1,425	1,174	10,845	30,549	13,540	2,924	1,058	681				817	82,976
1983	1,255	6,139	14,297	1,009	642	22,805	26,421	13,391	4,425	1,279	597				429	92,689
1984	2,057	23,429	9,240	2,743	2,032	14,768	26,418	9,103	2,480	1,919	336				449	94,974
1985	1,889	14,339	5,612	787	514	14,461	46,431	13,336	4,768	277	210	156	587	560	209	104,136
1986	1,524	12,361	6,009	1,800	3,770	14,299	27,690	13,048	4,233	313	804	458	580	3,351	24	90,264
1987	2,476	25,787	8,785	886	2,574	14,887	24,663	11,425	3,893	906	325	924	380	0	462	98,373
1988	2,916	40,037	8,076	1,927	5,221	16,588	58,609	11,314	8,367	1,911	291	364	1,163	0	0	156,784
1989	4,341	23,846	9,040	1,321	4,477	11,041	44,518	8,143	5,429	835	372	863	844	0	0	115,070
1990	2,022	18,762	6,588	650	746	15,950	30,699	8,746	3,068	1,067	262	754	622	0	99	90,035
1991	2,277	22,186	4,968	926	1,099	15,740	39,636	9,138	2,816	512	477	2,709	900	0	0	103,384
1992	3,969	25,814	5,349	1,044	510	11,875	27,995	4,186	2,511	840	500	2,605	257	0	812	88,267
1993	3,602	35,763	5,926	230	885	13,829	21,565	3,686	1,343	201	482	2,102	227	0	176	90,017
1994	4,303	28,539	5,082	635	1,356	14,153	22,446	3,532	2,898	66	512	1,328	242	2,292	163	87,547
1995	1,707	20,650	4,349	409	4,115	7,285	14,878	2,109	818	118	151	522	71	0	0	57,182
1996	1,579	24,874	4,307	961	1,681	21,364	21,780	5,606	1,940	76	218	4,021	16	0	38	88,461
1997	2,938	11,773	4,095	377	393	11,599	25,695	4,639	1,938	20	709	4,858	96	0	69	69,199
1998	2,031	23,750	5,499	646	797	5,057	17,693	2,425	1,300	68	121	4,272	356	0	45	64,060
1999	2,724	14,429	3,658	119	738	8,674	24,527	3,798	1,740	108	369	6,785	7	2,708	0	70,384
2000	2,824	32,530	7,536	954	1,254	11,233	28,745	3,393	1,194	116	805	5,698	113	6,131	305	102,831

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Table 8.—Page 2 of 2.

Year	Salmon						Rain- bow trout	Dolly Varden	Arctic gray- ling	Lake trout	Burbot	Nor- thern pike	White- fish	Smelt	Other	Total
	Chinook	Coho	Sock- eye	Pink	Chum	Land- locked										
2001	2,255	30,106	4,328	404	1,155	7,556	21,061	2,662	1,215	162	230	6,544	551	1,574	117	79,920
2002	3,195	44,448	4,619	466	1,685	9,137	28,325	1,822	881	533	1,069	5,716	190	0	26	102,112
2003	2,562	24,583	6,606	52	1,124	5,800	17,617	2,247	1,222	339	438	4,026	108	1,578	30	68,332
2004	2,556	34,298	7,148	859	808	5,915	17,738	2,380	703	0	171	4,961	15	11	0	77,563
2005	3,692	27,000	3,460	270	747	6,685	14,367	2,040	507	220	805	6,160	710	0	373	67,036
2006	3,813	39,953	4,622	698	780	3,680	13,524	1,525	972	40	550	6,664	162	71	0	77,054
2007	4,326	27,733	7,030	287	364	1,654	10,613	4,063	605	127	240	3,050	43	124	34	60,293
2008	2,843	35,996	6,695	304	620	2,198	15,537	1,935	744	300	926	1,752	31	0	0	69,881
2009	2,152	37,271	5,963	370	732	793	7,981	1,842	1,455	71	17	4,647	16	0	0	63,310
2010	1,076	26,369	5,630	919	528	2,008	10,845	1,612	687	100	163	3,372	17	0	0	53,326
2011	1,012	8,484	3,589	294	659	740	9,368	1,593	439	0	132	5,963	112	0	0	32,385
2012	292	5,014	2,685	166	782	2,730	8,294	928	277	48	33	3,231	0	0	0	24,480
2013	495	12,335	2,749	180	302	1,822	9,195	1,028	180	0	26	9,338	0	0	0	37,650
2014	1,026	16,180	2,252	761	778	4,005	9,286	2,751	332	12	484	5,067	40	0	12	42,986
2015	1,628	17,800	2,183	338	840	679	10,265	1,078	63	20	386	10,097	0	0	97	45,474
2016	2,374	7,989	3,418	239	846	922	10,495	1,115	296	0	214	5,026	0	0	0	32,934
Mean																
1977–2016	2,166	21,504	5,355	883	1,243	10,355	22,830	5,656	2,507	540	388	3,876	264	575	208	77,407
2012–2016	1,163	11,864	2,657	337	710	2,032	9,507	1,380	230	16	229	6,552	8	0	22	36,705
% of mean																
1977–2016	3	28	7	1	2	13	29	7	3	1	1	5	<1	1	<1	100
2017	902	6,232	1,263	122	966	2,014	9,375	901	357	0	115	3,369	0	0	12	25,628

Source: Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: Blank cells indicate no data.

Table 9.—Eastside Susitna River Management Unit sport fish harvest by species, 1977–2017.

Year	Salmon						Rain- bow trout	Dolly Varden	Arctic gray- ling	Lake trout	Burbot	White- fish	Nor- thern pike	Smelt	Other	Total
	Chinook	Coho	Sock- eye	Pink	Chum	Land- locked										
1977	1,056	5,709	3,594	19,663	1,382	512	5,225	2,726	7,469	693	619				626	49,274
1978	886	8,573	267	50,711	14,203	2,368	5,930	5,640	6,590	877	271				153	96,469
1979	1,298	7,564	1,020	11,189	3,791	291	9,463	3,699	10,489	472	427				773	50,476
1980	1,370	10,368	873	52,746	4,552	1,663	6,715	2,671	10,959	267	367				720	93,271
1981	2,202	6,593	833	8,143	4,149	278	8,813	2,874	11,860	287	220				306	46,558
1982	2,063	10,167	1,555	15,345	6,644	996	7,536	4,066	9,747	335	199				345	58,998
1983	2,852	5,176	3,221	3,954	4,982	1,049	9,639	4,205	7,478	1,404	901				469	45,330
1984	4,428	13,916	2,705	9,491	5,211	660	7,656	4,004	11,222	362	1,133	1,058			225	62,071
1985	4,342	7,042	1,465	2,510	2,142	884	7,872	3,138	7,822	17	1,085	1,365			0	39,684
1986	8,569	16,190	4,029	10,527	4,756	2,106	8,061	4,213	10,346	1,816	1,380	1,090			0	73,083
1987	8,603	11,028	2,046	2,209	3,042	145	6,647	3,946	7,568	343	1,175	796			0	47,548
1988	9,139	19,518	2,857	4,129	6,604	619	7,622	4,748	6,020	291	600	546			0	62,693
1989	9,783	17,078	2,527	2,715	4,151	536	4,972	3,040	4,562	1,210	395	442			15	51,426
1990	9,423	11,743	2,677	4,093	1,565	151	5,008	3,613	2,910	387	1,345	1,378			67	44,360
1991	9,083	19,479	2,897	2,001	1,950	14	7,854	2,140	3,875	726	407	626			16	51,068
1992	21,307	33,790	3,468	5,899	2,044	86	3,948	2,394	2,189	495	608	265			76	76,569
1993	22,688	26,063	4,137	3,941	1,480	738	3,713	1,413	2,401	288	909	87	0		49	67,907
1994	14,970	20,870	3,443	1,968	1,269	45	3,658	1,033	3,484	232	674	172	0		166	51,984
1995	7,872	19,165	3,682	2,311	3,234	33	3,138	1,012	1,486	254	517	80	0		61	42,845
1996	11,023	24,174	2,675	3,890	2,808	1,986	2,510	2,027	1,913	308	284	0	11		63	53,672
1997	10,989	10,297	5,851	2,477	2,852	122	2,324	906	1,387	189	304	32	95		84	37,909
1998	10,472	23,086	5,859	5,579	2,260	320	968	889	1,413	217	208	96	130		17	51,514
1999	16,875	23,292	4,608	2,887	2,941	703	1,755	918	1,614	222	230	32	260	9,816	0	66,153
2000	11,774	37,748	6,509	11,483	3,279	831	1,521	823	979	154	242	52	101	0	0	75,496

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Table 9.—Page 2 of 2.

Year	Salmon						Rain- bow trout	Dolly Varden	Arctic gray- ling	Lake trout	Burbot	White- fish	Nor- thern pike	Smelt	Other	Total
	Chinook	Coho	Sock- eye	Pink	Chum	Land- locked										
2001	13,504	26,617	6,776	3,650	3,180	0	1,112	1,172	1,036	226	214	135	55	1,349	179	59,205
2002	10,695	27,183	3,427	3,760	3,389	0	1,751	1,512	1,165	103	211	67	618	0	31	53,912
2003	9,499	18,585	2,734	1,775	2,725	105	2,581	1,694	393	339	511	82	0	0	741	41,764
2004	8,498	20,484	3,107	3,321	2,547	25	1,924	1,093	975	594	238	94	91	0	0	42,991
2005	8,453	17,471	1,677	2,625	2,506	0	793	482	404	32	260	0	104	0	259	35,066
2006	7,339	22,719	1,412	3,918	1,321	8	1,590	619	427	111	406	0	137	0	36	40,043
2007	8,337	13,464	1,470	2,165	1,204	100	840	253	779	296	321	164	1,355	0	15	30,763
2008	5,834	24,211	2,975	1,985	1,229	0	1,521	359	421	98	533	244	468	0	131	40,009
2009	3,462	15,335	7,130	4,657	1,531	528	691	282	487	125	200	0	385	0	0	34,813
2010	2,274	14,291	3,914	1,455	1,399	76	1,826	592	546	84	440	27	1,033	0	0	27,957
2011 <sup>a</sup>	2,710	9,040	2,459	1,572	2,167	102	977	239	211	516	60	0	2,138	0	7	22,198
2012	203	7,629	4,277	1,367	2,214	105	623	95	277	103	217	0	79	0	275	17,464
2013	18	12,989	4,170	2,986	1,519	28	1,248	605	226	144	474	0	1,223	0	0	25,630
2014	31	12,462	3,325	1,188	1,590	121	1,160	309	320	98	262	40	620	1,213	0	22,739
2015	258	15,043	1,984	2,533	1,821	0	468	679	905	166	194	26	371	0	0	24,448
2016	401	5,939	6,042	2,132	552	24	1,281	210	208	100	153	25	1,658	0	21	18,746
Mean																
1977–2016	7,115	16,302	3,242	7,024	3,055	459	3,823	1,908	3,614	375	480	273	456	688	148	48,353
2012–2016	182	10,812	3,960	2,041	1,539	56	956	380	387	122	260	18	790	243	59	21,805
% of mean																
1977–2016	15	34	7	15	6	1	8	4	7	1	1	1	1	1	<1	100
2017	0	12,838	2,297	2,144	1,730	419	817	136	203	14	114	0	654	650	0	22,016

Source: Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: Blank cells indicate no data.

<sup>a</sup> Totals for 2011 include Susitna River salmon, rainbow trout, Arctic grayling, and burbot.

Table 10.—Westside Susitna River Management Unit sport fish harvest by species, 1977–2017.

Year	Salmon					Rain- bow trout	Dolly Varden	Arctic gray- ling	Lake trout	Burbot	Nor- thern pike <sup>a</sup>	White- fish	Smelt <sup>b</sup>	Other	Total
	Chinook	Coho	Sock- eye	Pink	Chum										
1977	2,938	6,599	2,786	8,142	423	7,472	2,246	4,414	278	115	132			551	36,096
1978	2,039	10,173	1,634	5,605	2,635	12,295	2,667	6,725	596	153	316			370	45,208
1979	5,768	9,036	1,557	1,854	1,154	12,555	4,591	9,089	63	454	382			436	46,939
1980	6,148	12,141	1,111	4,237	491	12,785	2,825	9,247	448	706	232			103	50,474
1981	4,742	5,940	1,408	555	240	11,296	2,003	5,250	297	211	125			86	32,153
1982	8,573	10,658	2,881	2,065	293	11,465	1,813	6,525	167	776	607			366	46,189
1983	9,568	3,610	3,549	702	398	9,253	2,400	9,314	849	807	944			461	41,855
1984	12,106	9,511	3,415	2,467	872	8,079	798	7,409	562	1,309	1,821			598	48,947
1985	13,644	11,270	2,302	584	347	8,114	1,267	5,895	328	560	1,248	525	1,680	104	47,868
1986	13,402	13,117	4,076	3,385	615	6,668	2,470	5,441	157	715	1,519	435	7,300	0	59,300
1987	13,350	8,746	2,427	1,467	688	8,020	688	4,908	797	3,640	1,540	1,685	9,265	31	57,252
1988	15,970	16,283	3,167	2,582	1,474	8,058	1,401	4,275	327	944	2,818	1,419	8,849	0	67,567
1989	19,343	18,226	2,307	1,045	415	4,928	1,486	2,104	352	192	2,257	382	2,324	0	55,361
1990	17,425	13,883	1,938	1,238	234	3,960	1,163	2,158	202	1,534	2,088	1,381	5,591	51	52,846
1991	21,836	20,507	3,083	524	191	4,526	1,436	3,367	289	97	3,931	531	6,132	64	66,514
1992	18,737	16,218	2,916	1,264	304	2,028	400	1,572	363	304	2,777	340	15,523	22	62,768
1993	21,142	15,454	2,161	586	147	2,481	463	1,422	276	264	3,619	555	6,596	49	55,215
1994	10,248	15,361	1,919	1,259	312	2,526	507	1,654	113	1,090	2,556	779	9,483	84	47,891
1995	6,265	17,148	2,106	361	591	1,757	622	895	84	190	3,024	76	4,549	20	37,688
1996	5,879	17,375	1,115	558	297	1,924	693	1,736	87	396	3,902	160	1,818	0	35,940
1997	7,799	7,123	3,109	729	989	1,452	249	844	311	861	4,026	18	8,515	85	36,110
1998	9,716	13,235	2,463	1,589	394	1,081	122	987	46	1,029	3,753	114	5,795	5	40,329
1999	12,131	17,995	5,279	577	421	1,866	266	715	72	672	3,686	95	27,031	0	70,806
2000	17,341	23,262	4,946	2,159	594	1,226	534	666	60	1,130	3,692	139	5,492	11	61,252

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Table 10.–Page 2 of 2.

Year	Salmon					Rain- bow trout	Dolly Varden	Arctic gray- ling	Lake trout	Burbot	Nor- thern pike <sup>a</sup>	White- fish	Smelt <sup>b</sup>	Other	Total
	Chinook	Coho	Sock- eye	Pink	Chum										
2001	13,914	19,221	6,311	1,074	439	759	304	575	34	245	5,479	111	8,707	0	57,173
2002	11,357	14,144	1,881	700	377	1,209	320	479	0	91	5,865	74	3,298	236	40,031
2003	15,035	16,072	8,660	449	476	1,425	78	327	169	397	3,816	93	5,465	0	52,462
2004	15,694	17,785	3,358	2,292	520	1,629	124	291	109	320	6,626	218	12,562	24	61,552
2005	15,945	18,266	2,219	519	111	339	151	208	152	292	4,889	71	3,068	3,214	49,444
2006	16,454	20,474	626	338	113	1,027	209	716	0	126	4,318	168	0	1,364	45,933
2007	11,370	14,065	3,177	451	136	619	79	330	56	350	3,526	242	620	0	35,021
2008	6,805	15,126	1,428	201	231	744	91	350	55	256	5,683	89	1,832	27	32,918
2009	4,713	14,464	2,358	734	193	865	190	182	48	86	3,368	50	0	74	27,325
2010	6,306	16,245	1,505	585	223	434	40	725	132	55	5,283	97	2,510	0	34,140
2011	5,914	12,483	3,413	124	54	341	52	154	31	116	2,969	0	6,763	175	32,589
2012	2,525	9,434	1,118	314	156	179	139	175	16	204	4,505	66	3,290	0	22,121
2013	2,427	13,042	5,190	225	158	468	162	909	44	80	8,168	0	1,704	0	32,577
2014	2,018	12,972	2,759	650	1,017	872	26	8,684	0	243	4,021	11	1,213	31	34,517
2015	3,619	14,191	3,427	252	378	494	186	337	96	373	6,997	8	1,015	0	31,373
2016	4,366	4,022	4,409	222	116	418	21	204	365	212	4,364	23	0	0	18,742
Mean															
1977–2017	10,364	13,622	2,887	1,367	480	3,941	882	2,781	211	540	3,272	311	5,562	216	45,262
2012–2017	2,991	10,732	3,381	333	365	486	107	2,062	104	222	5,611	22	1,444	6	27,866
% of mean															
1977–2017	23	30	6	3	1	9	2	6	<1	1	7	1	12	<1	100
2017	2,550	10,759	2,795	548	280	362	43	93	0	150	5,039	0	0	0	22,619

Source: Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited January 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: Blank cells indicate no data.

<sup>a</sup> Northern pike may include Susitna River totals.

<sup>b</sup> Smelt may include Susitna River totals.

Table 11.—West Cook Inlet Management Unit sport fish harvest by species, 1977–2017.

Year	Salmon					Rain- bow trout	Dolly Varden	Arctic gray- ling	Lake trout	Burbot	White- fish	Smelt	Nor- thern pike	Other	Total
	Chinook	Coho	Sock- eye	Pink	Chum										
1977	473	532	6	670	7	958	852	0		0		0	0	12	3,510
1978	478	378	0	650	0	723	841	0		0		0	0	0	3,070
1979	98	337	0	64	0	1,063	846	0		0		0	0	45	2,453
1980	34	628	0	301	0	560	275	0		0		0	0	0	1,798
1981	192	604	48	95	0	1,734	958	0		0		0	0	0	3,631
1982	147	745	10	210	0	398	304	0		0		0	0	0	1,814
1983	1,185	2,552	466	21	10	871	366	115		0		0	0	10	5,596
1984	1,833	2,681	249	62	0	748	535	37		0		0	0	0	6,145
1985	2,029	6,320	461	137	50	902	885	69		0	0	0	0	0	10,853
1986	2,378	4,222	89	280	213	223	537	89		0	0	0	0	0	8,031
1987	1,477	8,548	272	72	54	579	362	36		0	0	0	0	0	11,400
1988	1,695	7,403	473	55	109	673	182	73		0	0	0	291	0	10,954
1989	2,325	7,683	529	110	0	544	191	143		19	48	0	0	0	11,592
1990	2,097	6,016	636	24	12	472	270	51		0	135	0	0	0	9,713
1991	762	8,253	765	44	0	497	1,145	26		0	0	0	0	0	11,492
1992	1,213	7,037	188	18	0	190	516	113		0	0	0	0	0	9,275
1993	1,955	10,326	2,355	70	24	191	416	9		0	9	0	0	29	15,384
1994	1,583	8,247	2,035	16	0	225	91	8	0	0	0	1,360	9	9	13,583
1995	693	8,182	1,304	0	27	111	424	0	0	0	0	0	0	0	10,741
1996	1,358	11,430	2,951	21	55	439	770	135	0	0	0	363	0	0	17,522
1997	894	6,492	2,174	37	33	618	800	256	0	0	68	338	45	0	11,755
1998	693	8,160	2,522	75	0	189	300	52	7	0	0	2,581	25	0	14,604
1999	1,073	9,339	2,990	236	122	277	924	66	0	0	0	0	93	0	15,120
2000	1,163	11,712	4,244	31	39	211	1,366	84	55	0	7	204	86	0	19,202

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Table 11.–Page 2 of 2.

Year	Salmon					Rain- bow trout	Dolly Varden	Arctic gray- ling	Lake trout	Burbot	White- fish	Smelt	Nor- thern pike	Other	Total
	Chinook	Coho	Sock- eye	Pink	Chum										
2001	722	13,949	3,150	101	252	270	422	38	17	0	0	0	661	0	19,582
2002	1,227	13,380	2,019	251	10	236	496	7	7	0	0	0	119	0	17,752
2003	1,124	14,239	4,708	0	77	264	356	0	11	0	0	455	182	0	21,416
2004	795	16,179	3,323	157	84	177	368	179	31	0	0	0	493	98	21,884
2005	592	12,572	4,025	46	0	196	326	0	0	0	26	0	153	0	17,936
2006	1,038	11,940	4,993	55	13	170	133	19	6	0	0	0	285	10	18,662
2007	1,380	12,580	8,187	166	45	216	532	42	164	0	0	0	225	0	23,537
2008	437	14,673	5,652	9	153	106	645	56	0	0	0	0	96	0	21,827
2009	829	9,801	4,261	181	101	10	153	0	0	0	0	880	88	0	16,304
2010	854	9,030	5,232	183	310	89	326	0	0	0	0	0	225	0	16,249
2011	76	6,292	4,412	25	0	43	105	0	17	0	0	0	19	0	10,989
2012	0	7,813	4,966	33	26	102	283	0	6	0	17	0	0	17	13,263
2013	0	7,698	5,003	0	0	0	347	187	11	0	0	0	35	0	13,281
2014	130	7,320	6,796	0	36	32	256	41	0	0	0	0	0	21	14,632
2015	122	12,849	5,525	0	0	61	144	263	0	16	0	0	0	0	18,980
2016	35	6,029	6,248	0	0	0	92	0	0	0	0	0	321	0	12,725
Mean															
1977–2016	930	7,854	2,582	113	47	384	479	55	14	1	10	155	86	6	12,706
2012–2016	57	8,342	5,708	7	12	39	224	98	3	3	3	0	71	8	14,576
% of mean															
1977–2016	7	62	20	1	<1	3	4	<1	<1	<1	<1	1	1	<1	100
2017	41	4,828	5,961	42	18	0	117	0	0	0	0	0	32	41	11,080

Source: Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: Blank cells indicate no data.

Table 12.—Catch and percent of fish released by sport anglers in the Northern Cook Inlet Management Area for 2004–2017.

Year		Salmon						Lake trout	Dolly Varden	Rain-bow Trout	Arctic gray-ling	White-fish	Nor-thern pike	Burbot	Smelt	Other	Total
		Chinook	Coho	Sock-eye	Pink	Chum	Land-locked										
2004	Catch	77,865	188,606	38,286	126,574	58,706	15,538	2,300	35,519	161,254	30,204	3,492	33,880	1,354	12,640	422	786,640
	% rel.	64.6	52.9	55.8	94.8	93.3	61.8	68.1	88.8	86.7	92.9	90.6	64.1	46.2	0.5	71.1	74.1
2005	Catch	151,901	184,758	29,771	64,022	48,532	17,526	8,661	47,603	143,424	21,572	6,151	37,894	3,672	3,068	8,423	776,978
	% rel.	81.1	59.2	61.8	94.6	93.1	61.9	95.3	93.7	89.1	94.8	86.9	70.2	63.0	0.0	54.3	78.2
2006	Catch	84,225	174,139	27,002	83,821	45,155	11,042	1,119	26,933	132,482	20,571	1,480	31,550	4,065	110	1,626	645,320
	% rel.	66.0	45.4	56.8	94.0	95.1	66.6	86.0	90.8	87.7	89.6	77.7	63.9	73.4	35.5	13.3	71.8
2007	Catch	70,322	110,675	39,248	46,864	30,031	4,308	1,694	27,677	138,979	14,946	1,220	21,711	2,424	744	108	510,951
	% rel.	63.9	38.7	49.4	93.5	94.2	59.3	62.0	82.2	91.2	88.3	63.2	62.4	62.4	0.0	54.6	70.7
2008	Catch	41,086	141,508	32,586	46,753	32,831	6,892	1,659	26,981	123,722	20,303	1,826	24,367	3,167	1,832	304	505,817
	% rel.	61.3	36.4	48.6	94.7	93.2	68.1	72.7	88.8	85.5	92.3	80.1	67.2	45.8	0.0	48.0	67.5
2009	Catch	32,710	129,331	38,370	112,200	30,622	11,344	1,589	19,398	105,467	26,465	871	27,903	937	880	355	538,442
	% rel.	65.9	40.6	48.6	94.7	91.6	88.4	84.6	87.3	90.9	92.0	92.4	69.6	67.7	0.0	79.2	73.7
2010	Catch	23,107	106,123	27,462	54,859	36,190	6,443	2,781	19,390	103,203	19,171	1,157	29,557	1,044	6,956	0	437,443
	% rel.	54.5	37.9	40.7	94.3	93.2	67.7	88.6	86.7	87.2	89.8	87.8	66.5	37.0	63.9	—	69.9
2011	Catch	26,308	63,235	27,868	30,949	41,077	1,862	2,063	17,301	147,433	25,130	369	15,262	611	6,763	0	406,231
	% rel.	63.1	42.6	50.2	93.5	93.0	54.8	72.7	88.5	92.7	96.8	69.6	27.3	49.6	0.0	1.0	75.8
2012	Catch	10,132	42,728	24,077	42,970	50,760	4,530	961	16,396	82,220	19,476	462	19,387	505	3,296	586	318,486
	% rel.	70.2	30.0	45.8	95.6	93.7	37.4	82.0	91.2	88.8	96.3	82.0	59.7	10.1	0.2	1.0	75.7
2013	Catch	18,137	76,426	28,697	40,551	25,824	7,782	2,519	19,657	117,153	25,391	412	32,808	855	0	0	396,212
	% rel.	83.8	39.7	40.4	91.6	92.3	76.2	92.1	89.1	90.7	94.1	100.0	42.8	32.2	—	—	72.5
2014	Catch	15,853	71,136	29,104	31,135	34,399	10,971	256	23,496	122,949	27,306	884	15,570	1,119	0	96	406,515
	% rel.	79.8	31.2	48.0	91.7	90.1	62.4	57.0	85.8	90.8	65.7	89.7	37.6	11.6	—	1.0	71.7
2015	Catch	31,912	97,540	28,600	69,582	60,705	3,016	1,409	36,447	140,404	24,108	439	23,344	2,051	1,142	1,528	522,227
	% rel.	82.4	38.6	54.1	95.5	95.0	77.5	80.0	94.3	92.0	93.5	92.3	25.2	52.8	11.1	93.7	77.0
2016	Catch	24,391	35,332	31,440	38,674		2,542	1,932	18,061	106,351	20,021	205	14,679	914	0	1,197	316,230
	% rel.	70.6	32.1	36.0	93.3		62.8	75.9	92.0	88.5	96.5	76.6	22.5	36.7	0.0	98.2	73.7
2017	Catch	12,422	56,785	20,212	40,741	30,655	6,113	657	10,619	83,412	11,634	508	10,693	436	650	155	285,692
	% rel.	71.9	39.0	39.1	93.0	90.2	60.2	97.9	88.7	87.3	94.4	100.0	15.0	13.1	0.0	65.8	71.5

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Table 13.—Catch and percent of fish released by sport anglers in the Knik Arm Management Unit, 2012–2017.

Species	2012		2013		2014		2015		2016		2017	
	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.
Chinook salmon	474	38.4	963	48.6	1,829	43.9	3,124	47.9	4,923	51.8	2,130	57.7
Coho salmon	7,286	31.2	16,106	23.4	20,434	20.8	21,100	15.6	11,979	33.3	8,276	24.7
Sockeye salmon	4,423	39.3	3,401	19.2	4,659	51.7	2,806	22.2	5,972	42.8	1,866	32.3
Pink salmon	1,340	87.6	914	80.3	2,771	72.5	1,430	76.4	3,514	93.2	1,603	92.4
Chum salmon	4,147	81.1	2,921	89.7	3,417	77.2	5,080	83.5	6,052	86.0	4,444	78.3
Landlocked salmon	4,425	38.3	7,610	76.1	10,769	62.8	3,016	77.5	2,464	62.6	5,463	63.1
Lake trout	288	83.3	115	100.0	23	47.8	20	0.0	121	100.0	136	100.0
Dolly Varden	3,944	76.5	3,746	72.6	5,554	50.5	6,282	82.8	5,672	80.3	2,938	69.3
Rainbow trout	29,680	72.1	52,070	82.3	46,671	80.1	51,799	80.2	46,599	77.5	51,065	81.6
Arctic grayling	1,814	84.7	3,976	95.5	2,783	88.1	2,413	97.4	1,540	80.8	2,516	85.8
Whitefish	43	100.0	38	100.0	47	14.9	0		0	0.0	12	0.0
Northern pike	5,742	43.7	11,182	16.5	7,941	36.2	9,417	0.0	5,804	13.4	3,945	14.6
Burbot	84	60.7	42	38.1	614	21.2	1,379	72.0	279	23.3	115	0.0
Smelt	0		0		2,022	100.0	0		0	0.0	0	0.0
Other	0		0		24	50.0	1,176	91.8	1,176	100.0	0	0.0
Total	63,690	61.6	103,084	63.5	109,558	60.8	109,042	58.3	96,095	65.7	84,509	69.7

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Table 14.—Catch and percent of fish released by sport anglers in the Eastside Susitna River Management Area, 2012–2017.

Species	2012		2013		2014		2015		2016		2017	
	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.
Chinook salmon	1,855	89.1	5,502	99.7	2,847	98.9	10,638	97.6	5,326	92.5	3,465	100.0
Coho salmon	14,164	46.1	21,147	38.6	18,874	34.0	25,747	41.6	9,680	38.6	19,826	35.2
Sockeye salmon	7,777	45.0	8,372	50.2	5,406	38.5	6,275	68.4	9,360	35.4	4,662	50.7
Pink salmon	26,095	94.8	37,286	92.0	13,523	91.2	52,708	95.2	30,921	93.1	19,996	89.3
Chum salmon	37,125	94.0	20,939	92.7	17,492	90.9	38,475	95.3	12,790	95.7	22,921	92.5
Landlocked salmon	105	0.0	172	83.7	202	40.1	0		78	69.2	650	35.5
Lake trout	516	80.0	1,887	92.4	162	39.5	1,127	85.3	1,354	92.6	211	93.4
Dolly Varden	4,669	98.0	8,820	93.1	8,575	96.4	21,614	96.9	6,265	96.6	2,636	94.8
Rainbow trout	27,446	97.7	44,029	97.2	33,899	96.6	49,431	99.1	39,576	96.8	25,774	96.8
Arctic grayling	10,218	97.3	11,772	98.1	15,798	98.0	13,550	93.3	11,214	98.1	5,445	96.3
Whitefish	230	100.0	374	100.0	220	81.8	256	89.8	162	84.6	105	100.0
Northern pike	3,959	98.0	1,630	25.0	919	32.5	4,309	91.4	1,698	2.4	793	17.5
Burbot	217	0.0	514	7.8	262	0.0	194	0.0	402	61.9	149	23.5
Smelt	0	0.0	0	0.0	20,219	94.0	0	0.0	0	0.0	650	0.0
Other	516	46.7	0	0.0	7	100.0	180	100.0	21	0.0	31	100.0
Total	134,892	87.1	162,444	84.2	138,405	83.6	224,504	89.1	128,847	85.5		

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.



Table 15.—Catch and percent of fish released by sport anglers in the Westside Susitna River Management Unit, 2012–2017.

Species	2012		2013		2014		2015		2016		2017	
	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.
Chinook salmon	7,525	66.4	11,360	78.6	9,670	79.1	17,774	79.6	14,089	69.0	6,663	61.7
Coho salmon	9,434	0.0	25,256	48.4	18,874	31.3	30,111	52.9	5,996	32.9	20,544	47.6
Sockeye salmon	3,643	69.3	9,516	45.5	6,066	54.5	10,420	67.1	7,106	38.0	4,610	39.4
Pink salmon	14,994	97.9	1,443	84.4	13,724	95.3	14,974	98.3	3,787	94.1	18,143	97.0
Chum salmon	7,916	98.0	245	35.5	11,088	90.8	15,098	97.5	1,272	90.9	3,209	91.3
Landlocked salmon	0	—	0	—	0	—	0	—	0	—	0	0.0
Lake trout	145	89.0	210	79.0	0	—	199	51.8	365	0.0	0	
Dolly Varden	2,199	93.7	2,451	93.4	2,892	99.1	5,290	96.5	2,669	99.2	2,026	97.9
Rainbow trout	24,718	99.3	20,178	97.7	40,833	97.9	38,294	98.7	19,406	97.8	5,988	94.0
Arctic grayling	7,313	97.6	9,456	90.4	8,684	0.0	7,882	95.7	7,236	97.2	2,389	96.1
Whitefish	147	55.1	0	—	222	95.0	174	95.4	43	46.5	261	100.0
Northern pike	9,686	53.5	19,753	58.6	5,578	27.9	9,548	26.7	6,856	36.3	5,892	14.5
Burbot	204	0.0	299	73.2	243	0.0	478	22.0	233	9.0	172	12.8
Smelt	3,296	0.2	0	—	0	—	1,142	11.1	0	—	0	—
Other	53	100.0	0	—	44	29.5	44	100.0	0	—	0	—
Total	91,273	75.8	100,167	67.5	117,918	70.7	151,428	79.3	69,058	72.9	69,897	67.6

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Table 16.—Catch and percent of fish released by sport anglers in the West Cook Inlet Management Unit, 2012–2017.

Species	2012		2013		2014		2015		2016		2017	
	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.	Catch	% Rel.
Chinook salmon	278	100.0	312	100.0	1,507	91.4	376	67.6	53	34.0	164	75.0
Coho salmon	11,844	34.0	13,917	44.7	12,954	43.5	20,582	37.6	7,677	21.5	8,139	40.7
Sockeye salmon	8,234	39.7	7,408	32.5	12,973	47.6	9,099	39.3	9,002	30.6	9,074	34.3
Pink salmon	541	93.9	908	100.0	1,117	100.0	470	100.0	452	100.0	999	95.8
Chum salmon	1,572	98.3	1,719	100.0	2,402	98.5	2,052	100.0	377	100.0	81	77.8
Landlocked salmon	0	—	0	—	0	—	0	—	0	—	0	—
Lake trout	12	50.0	307	96.4	71	100.0	63	100.0	92	100.0	310	100.0
Dolly Varden	5,584	94.9	4,640	92.5	6,475	96.0	3,261	95.6	3,455	97.3	3,019	96.1
Rainbow trout	376	72.9	876	100.0	1,546	97.9	880	93.1	770	100.0	585	100.0
Arctic grayling	131	100.0	187	0.0	41	0.0	263	0.0	31	100.0	1,284	100.0
Whitefish	42	59.5	0	—	395	100.0	9	100.0	0	—	130	0.0
Northern pike	0	—	243	85.6	1,132	100.0	70	100.0	321	0.0	63	49.2
Burbot	0	—	0	—	0	—	0	—	0	—	0	—
Smelt	0	—	0	—	0	—	0	—	0	—	0	—
Other	17	0.0	0	—	21	0.0	128	100.0	0	—	124	0.0
Total	28,631	53.7	30,517	56.5	40,634	64.0	37,253	49.1	22,230	42.8	23,972	53.8

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019).

Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Table 17.—Time and area strata sampled for Chinook salmon genetics, reported harvest, and samples run for mixed stock analysis (MSA).

Date range	Geographic area <sup>a</sup>	Reported harvest <sup>b</sup>	Number sampled	Proportion sampled <sup>c</sup>	Number analyzed for MSA	Proportion analyzed for MSA
May 29–June 30, 2014	Trading Bay	532	133	25.0%	131	24.6%
May 29–June 30, 2014	Tyonek commercial	164	174	106.1%	121	73.8%
May 29–June 30, 2014	General Subdistrict (north)	398	302	75.9%	236	59.3%
May 29–June 30, 2014	Eastern Subdistrict	326	138	42.3%	130	39.9%
May 16–June 30, 2014	Tyonek subsistence	714	196	27.0%	196	27.5%
May 29–June 12, 2015	Tyonek commercial	114	118	103.5%	118	103.5%
June 13–30, 2015	Tyonek commercial	268	201	75.0%	173	64.6%
May 29–June 12, 2015	General Subdistrict (north)	343	234	68.2%	134	39.1%
June 13–22, 2015	General Subdistrict (north)	331	228	68.9%	133	40.2%
May 29–June 12, 2015	Eastern Subdistrict	208	213	102.4%	188	90.4%
June 13–30, 2015	Eastern Subdistrict	152	107	70.4%	100	65.8%
May 16–31, 2015	Tyonek subsistence	NA	105	NA	105	NA
June 1–20, 2015	Tyonek subsistence	961 <sup>b</sup>	222	34.0% <sup>c</sup>	201	31.8% <sup>c</sup>
Totals		5,255	2,371	45.1%	1,966	37.4%

<sup>a</sup> Refers to the Northern District commercial fishery unless subsistence is explicitly stated.

<sup>b</sup> Subsistence harvest is only reported as a season total.

<sup>c</sup> Proportion of subsistence harvest is calculated as the total number sampled divided by the reported harvest for the entire season.

Table 18.—Economic value of sport fishing in Southcentral Alaska and the Matanuska–Susitna Borough during 2007.

Parameter	Southcentral <sup>a</sup>			Matanuska–Susitna Borough <sup>b</sup>		
	Resident	Nonresident	Total	Resident	Nonresident	Total
Angler-days	1,085,962	710,843	1,796,805	178,886	117,095	295,981
As % of Southcentral				16.5	16.5	16.5
Spending <sup>c</sup>	\$560,955,071	\$427,603,048	\$988,558,119	\$92,404,041	\$70,437,459	\$162,841,500
\$/angler-day	\$517	\$602	\$550	\$517	\$602	\$550
Income	\$174,829,996	\$211,633,737	\$386,463,733	\$28,799,095	\$34,861,638	\$63,660,732
Employment (jobs)	5,170	6,365	11,535	852	1,048	1,900

<sup>a</sup> Source: Southwick Associates, Inc. et al. 2008.

<sup>b</sup> Source: Colt and Schwoerer (2009).

<sup>c</sup> Includes license and stamps, trips, packages, equipment, and real estate, and assumes all equipment and real estate were to be used only for sport fishing.

Table 19.—Susitna River mark–recapture estimated abundance by species and year.

Salmon species	Return year	Mainstem Susitna River		Yentna River		Total		Source <sup>a</sup>
		Abundance estimate	95% CI	Abundance estimate	95% CI	Abundance estimate	95% CI	
Sockeye	2006	107,000	(49,180–164,820)	311,197	(252,000–391,000)	418,197	(335,448–500,946)	FDS 07-83
	2007	87,883	(79,712–96,054)	239,849	(205,955–273,743)	327,732	(292,867–362,597)	FDS 11-19
	2008	70,552	(60,882– 80,221)	288,988	(251,436–326,540)	359,540	(320,763–398,317)	FDS 11-12
Coho	2010	73,640	(42,590–139,753)	122,777	(89,067–178,817)	196,417	(153,498–281,020)	FDS 13-05
	2011	131,878	(100,712–193,164)	84,677	(67,473–106,704)	216,555	(182,995–281,825)	FDS 16-35
	2012	90,397	(46,672–173,872)	93,919	(75,101–116,974)	184,316	(139,469–267,485)	FDS 16-52
	2013	130,026	(100,411–193,403)	Not done				AEA 2014
	2014	84,879	(68,799–106,083)	73,819	(61,120–87,004)	158,698	(137,817–183,294)	AEA 2015
	2015	152,500	(120,552–184,448)	110,321	(97,157–123,869)	262,821	(228,128–297,514)	<i>In prep a</i>
Chum	2010	151,127	(103,911–251,314)	205,869	(150,499–268,455)	356,996	(284,573–476,270)	FDS 13-05
	2011	1,468,231	(1,271,724–1,758,917)	283,801	(216,660–386,754)	1,752,032	(1,556,974–2,073,042)	FDS 16-35
	2012	229,903	(143,362–528,890)	99,442	(62,712–228,990)	329,345	(237,012–735,368)	FDS 16-52
Chinook	2013	89,463	(77,720–114,954)	Not done				AEA 2014
	2014	68,225	(53,473–94,240)	22,267	(17,466–28,701)	90,492	(74,498–116,748)	AEA 2015
	2015	88,600	(77,500–101,100)	48,400	(39,500–60,400)	137,000	(122,207–153,764)	<i>In prep a</i>
	2016	66,116	(58,694–74,734)	31,310	(23,336–42,682)	97,426	(86,142–111,334)	<i>In prep b</i>
	2017	45,503	(38,526–53,610)	17,837	(12,722–25,205)	63,340	(45,846–62,734)	<i>In prep c</i>
	2018	30,605	(23,128–38,816)	Not done				<i>In prep d</i>

<sup>a</sup> FDS = Fishery Data Series report published by ADF&G, Anchorage; FDS 07-83 is Yanusz et al. (2007); FDS 11-12 is Yanusz et al. (2011a); FDS 11-19 is Yanusz et al. (2011b); FDS 13-05 is Cleary et al. (2013); FDS 16-35 is Cleary et al. (2016b); FDS 16-52 is Cleary et al. (2016a); AEA is published by the Alaska Energy Authority; AEA 2014 = LGL Research Associates, Inc., and Alaska Department of Fish and Game, Division of Sport Fish. 2014. Initial Study Report Part A: Sections 1–6, 8–10. Susitna-Watana Hydroelectric Project, Anchorage; AEA 2015 = LGL Research Associates, Inc., and Alaska Department of Fish and Game, Division of Sport Fish. 2015. Salmon Escapement Study, Study Plan Section 9.7. Study Completion Report. Susitna-Watana Hydroelectric Project, Anchorage. *In prep a–d* are as follows: (a) DeCovich, N., J. Campbell, and D. Evans. *In Prep-a*. Susitna River Chinook and coho salmon abundance and distribution, 2015. Alaska Department of Fish and Game, Fishery Data Series, Anchorage. (b) DeCovich, N., J. Campbell, and D. Evans. *In Prep-b*. Susitna River Chinook salmon abundance and distribution, 2016. Alaska Department of Fish and Game, Fishery Data Series, Anchorage. (c) DeCovich, N., J. Campbell, and D. Evans. *In Prep c*. Susitna River Chinook salmon abundance and distribution, 2017. Alaska Department of Fish and Game, Fishery Data Series, Anchorage. (d) DeCovich, N., J. Campbell, and D. Evans. *In Prep d*. Susitna River Chinook salmon abundance and distribution, 2018. Alaska Department of Fish and Game, Fishery Data Series, Anchorage.

Table 20.—Estimated harvests of Chinook salmon of North Cook Inlet origin by all user groups, 1893–2017.

1893–1933		1934–1976		1977–2015	
Year	Harvest	Year	Harvest	Year	Harvest
1893	24,000	1935	60,060	1977	5,446
1894	12,400	1936	64,850	1978	4,430
1895	20,159	1937	68,786	1979	9,837
1896	14,461	1938	46,130	1980	11,301
1897	11,266	1939	42,181	1981	11,372
1898	13,111	1940	50,413	1982	17,146
1899	13,682	1941	83,858	1983	18,621
1900	21,346	1942	76,144	1984	23,842
1901	27,455	1943	89,105	1985	25,461
1902	39,210	1944	68,168	1986	43,327
1903	52,818	1945	55,362	1987	40,391
1904	24,058	1946	51,425	1988	44,263
1905	14,134	1947	85,443	1989	50,917
1906	17,936	1948	84,797	1990	42,414
1907	50,355	1949	89,025	1991	42,641
1908	27,019	1950	130,274	1992	51,650
1909	47,699	1951	150,010	1993	54,489
1910	39,222	1952	59,600	1994	35,516
1911	44,676	1953	71,544	1995	22,182
1912	38,293	1954	52,260	1996	22,984
1913	50,922	1955	37,199	1997	24,497
1914	38,043	1956	52,248	1998	26,569
1915	67,034	1957	34,214	1999	37,634
1916	50,316	1958	18,278	2000	37,344
1917	52,399	1959	26,226	2001	33,833
1918	27,909	1960	22,031	2002	29,986
1919	19,041	1961	15,822	2003	31,590
1920	31,650	1962	16,216	2004	31,244
1921	11,157	1963	14,106	2005	33,124
1922	24,824	1964	3,698	2006	34,092
1923	23,929	1965	7,801	2007	30,555
1924	21,610	1966	815	2008	21,278
1925	40,826	1967	623	2009	13,530
1926	60,496	1968	1,163	2010	13,155
1927	69,923	1969	3,927	2011	12,683
1928	55,908	1970	1,853	2012	4,974
1929	54,155	1971	10,494	2013	5,208
1930	57,854	1972	5,748	2014	5,456
1931	41,122	1973	246	2015	8,590
1932	56,745	1974	238	2016	10,505
1933	47,425	1975	301	2017	7,020
1934	57,903	1976	692		

Source: SWHS for the Division of Sport Fish; Fox and Shields (2000); data archived with the Division of Commercial Fisheries and the Division of Subsistence.

Table 21.—Estimated harvests by user of Chinook salmon originating from the Northern Cook Inlet Management Area, 1977–2017.

Year	Commercial <sup>a</sup>			Sport <sup>b</sup>					Subsistence <sup>d</sup>	Grand Total
	NCI <sup>c</sup>	Kus-tatan	Total	Knik Arm drainages	Eastside Susitna	Westside Susitna	West Cook Inlet	Total		
1977	565	207	772	207	1,056	2,938	473	4,674		5,446
1978	666	221	887	140	886	2,039	478	3,543		4,430
1979	1,714	159	1,873	800	1,298	5,768	98	7,964		9,837
1980	993	174	1,167	646	1,370	6,148	34	8,198	1,936	11,301
1981	725	43	768	1,466	2,202	4,742	192	8,602	2,002	11,372
1982	2,716	391	3,107	1,666	2,063	8,573	147	12,449	1,590	17,146
1983	933	163	1,096	1,255	2,852	9,568	1,185	14,860	2,665	18,621
1984	1,004	214	1,218	2,057	4,428	12,106	1,833	20,424	2,200	23,842
1985	1,890	195	2,085	1,889	4,342	13,644	2,029	21,904	1,472	25,461
1986	15,488	290	15,778	1,524	8,569	13,402	2,378	25,873	1,676	43,327
1987	12,700	175	12,875	2,476	8,603	13,350	1,477	25,906	1,610	40,391
1988	12,836	120	12,956	2,916	9,139	15,970	1,695	29,720	1,587	44,263
1989	12,731	1,144	13,875	4,341	9,783	19,343	2,325	35,792	1,250	50,917
1990	9,582	1,082	10,664	2,022	9,423	17,425	2,097	30,967	781	42,412
1991	6,859	922	7,781	2,277	9,083	21,836	762	33,958	902	42,641
1992	4,554	963	5,517	3,969	21,307	18,737	1,213	45,226	907	51,650
1993	3,307	425	3,732	3,602	22,688	21,142	1,955	49,387	1,370	54,489
1994	3,193	449	3,642	4,303	14,970	10,248	1,583	31,104	770	35,516
1995	4,130	198	4,328	1,707	7,872	6,265	693	16,537	1,317	22,182
1996	1,958	148	2,106	1,579	11,023	5,879	1,358	19,839	1,039	22,984
1997	1,133	105	1,238	2,938	10,989	7,799	894	22,620	639	24,497
1998	2,547	83	2,630	2,031	10,472	9,716	693	22,912	1,027	26,569
1999	2,812	789	3,601	2,724	16,875	12,131	1,073	32,803	1,230	37,634
2000	2,307	778	3,085	2,824	11,774	17,341	1,163	33,102	1,157	37,344
2001	1,811	651	2,462	2,255	13,504	13,914	722	30,395	976	33,833
2002	1,895	537	2,432	3,195	10,695	11,357	1,227	26,474	1,080	29,986
2003	1,683	504	2,187	2,562	9,499	15,035	1,124	28,220	1,183	31,590
2004	1,926	430	2,356	2,556	8,498	15,694	795	27,543	1,345	31,244
2005	3,373	87	3,460	3,692	8,453	15,945	592	28,682	982	33,124
2006	4,261	244	4,505	3,813	7,339	16,454	1,038	28,644	943	34,092
2007	3,818	43	3,861	4,326	8,337	11,370	1,380	25,413	1,281	30,555
2008	3,983	198	4,181	2,843	5,834	6,805	437	15,919	1,178	21,278
2009	1,631	107	1,738	2,152	3,462	4,713	829	11,156	636	13,530
2010	1,750	52	1,802	1,076	2,274	6,306	854	10,510	843	13,155
2011	2,299	77	2,376	1,012	2,710	5,914	76	9,712	595	12,683
2012	1,049	65	1,114	292	203	2,525	0	3,020	840	4,974
2013	1,327	124	1,451	495	18	2,427	0	2,940	817	5,208
2014	1,470	118	1,588	1,026	31	2,018	130	3,205	663	5,456
2015	1,923	79	2,002	1,628	258	3,619	122	5,627	961	8,590
2016	2,020	97	2,117	2,374	401	4,366	35	7,176	1,030	10,323
2017	2,230	96	2,326	902	0	2,550	41	3,493	1,201	7,020

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- <sup>a</sup> Source: Shields and Dupuis (2013).
- <sup>b</sup> Source: Mills (1979–1980, 1981a–b, 1982–1994); Howe et al. (1995, 1996). Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.
- <sup>c</sup> “Northern District” total from Shields and Dupuis (2013).
- <sup>d</sup> Source: Shields and Dupuis (2013). Includes Tyonek subsistence fishery (1980–2003) and Northern and Central districts subsistence fisheries (1985, 1991–1993). Data for 1994–1995 include the Northern District.



Table 22.—Chinook salmon escapement goals for Northern Cook Inlet Management Area waters.

Management unit	Drainage	Escapement goal range	Type <sup>a</sup>	Method of survey
Knik Arm				
	Little Susitna River	900–1,800	SEG	Aerial
Eastside Susitna River				
	Chulitna River	1,800–5,100	SEG	Aerial
	Clear Creek	950–3,400	SEG	Aerial
	Goose Creek <sup>b</sup>	250–650	SEG	Aerial
	Little Willow Creek	450–1,800	SEG	Aerial
	Montana Creek	1,100–3,100	SEG	Aerial
	Prairie Creek	3,100–9,200	SEG	Aerial
	Sheep Creek	600–1,200	SEG	Aerial
	Willow Creek	1,600–2,800	SEG	Aerial
Westside Susitna River				
	Alexander Creek <sup>b</sup>	2,100–6,000	SEG	Aerial
	Deshka River	13,000–28,000	SEG	Weir
	Lake Creek	2,500–7,100	SEG	Aerial
	Peters Creek	1,000–2,600	SEG	Aerial
	Talachulitna River	2,200–5,000	SEG	Aerial
West Cook Inlet				
	Chuitna River <sup>b</sup>	1,200–2,900	SEG	Aerial
	Lewis River <sup>b</sup>	250–800	SEG	Aerial
	Theodore River <sup>b</sup>	500–1,700	SEG	Aerial

Source: Fair et al. (2013).

<sup>a</sup> SEG means sustainable escapement goal.

<sup>b</sup> Closed in regulation.

Table 23.—History of escapement goals and escapement for Chinook salmon in NCIMA, 2006–2018.

		Escapement												
Unit	System	2006	2007	2008 <sup>a</sup>	2009	2010	2011	2012 <sup>b</sup>	2013	2014	2015	2016	2017	2018
Knik Arm														
	Little Susitna River	1,855	1,731	1,297	1,028	589	887	1,154	1,651	1,759	1,507	1,622	1,192	530
Eastside Susitna														
	Willow Creek	2,193	1,373	1,255	1,133	1,173	1,061	756	1,752	1,335	2,046	1,814	1,329	411
	Little Willow Creek	816	1,103	NC	776	468	713	494	858	684	788	675	840	208
	Sheep Creek	580	400	NC	500	NC	350	363	NC	262	NC	NC	NC	334
	Goose Creek <sup>c</sup>	306	105	117	65	76	80	57	62	232	NC	NC	148	90
	Montana Creek	1,850	1,936	1,357	1,460	755	494	416	1,304	953	1,416	692	603	473
	Clear (Chunilna) Creek	1,520	3,310	1,795	1,205	903	512	1,177	1,471	1,390	1,205	NC	780	940
	Prairie Creek	3,570	5,036	3,039	3,500	3,022	2,038	1,185	3,304	2,812	3,209	1,853	1,930	1,194
	Chulitna River	2,862	5,166	2,514	2,093	1,052	1,875	667	1,262	1,011	3,137	1,151	NC	1,125
Westside Susitna														
	Alexander Creek <sup>c</sup>	885	480	150	275	177	343	181	588	911	1,117	754	170	296
	Deshka River	31,150	18,714	7,533	11,967	18,594	19,026	14,010	18,531	16,335	24,316	22,774	11,383	8,549
	Peters Creek	1,114	1,225	NC	1,283	NC	1,103	459	1,643	1,443	1,514	1,122	307	0 <sup>d</sup>
	Lake Creek	5,300	4,081	2,004	1,394	1,617	2,563	2,366	3,655	3,506	4,686	3,588	1,601	1,767
	Talachulitna River	6,152	3,871	2,964	2,608	1,499	1,368	847	2,285	2,256	2,582	4,295	1,087	1,483
West Cook Inlet														
	Lewis River <sup>c</sup>	341	0 <sup>e</sup>	120	111	56	92	107	61	61	5 <sup>e</sup>	0 <sup>e</sup>	0 <sup>e</sup>	0 <sup>e</sup>
	Theodore River <sup>c</sup>	958	486	345	352	202	327	179	476	312	426	68	21	18
	Chuitna River <sup>c</sup>	1,911	1,180	586	1,040	735	719	502	1,690	1,398	1,965	1,372	235	939

Note: Numbers with grey fill indicate a missed escapement goal.

<sup>a</sup> Beginning of downturn in Chinook salmon escapements.

<sup>b</sup> Beginning of conservative management.

<sup>c</sup> Closed in regulation 2017–2018.

<sup>d</sup> Invalid count

<sup>e</sup> Lewis River diverged into muskeg one-half mile below the bridge; intermittent connection with Cook Inlet.

Table 24.—Chinook salmon sport harvest reduction by area as a result of emergency restrictions in the NCIMA, 2012–2017.

Year	Harvest reductions	Susitna River drainage						Total <sup>a</sup>
		Little Susitna River	Deshka River	Unit 2 streams	Talkeenta River	Yentna River drainage	Talachulitna River	
2009–2011	Average low year harvest	1,123	2,414	1,238	1,361	3,210	325	9,653
2012	Target reduction	50%	22%	90%	25%	45%	45%	50%
	Harvest	216	1,650	35	113	875	17	2,944
	Actual % reduction	81%	32%	97%	92%	73%	95%	70% <sup>b</sup>
2013	Target reduction	75%	25%	100%	100%	60%	100%	70–75%
	Harvest	336	1,087	0	0	1,340	0	2,781
	Actual % reduction	70%	55% <sup>c</sup>	100%	100%	58%	100%	71%
2014	Target reduction	75%	25%	100%	100%	60%	100%	70–75%
	Harvest	437	1,329	0	0	689	0	2,486
	Actual % reduction	61%	45%	100%	100%	79%	100%	74%
2015	Target reduction	75%	25%	100%	100%	60%	100%	70–75%
	Harvest	672	1,927	0	0	1,544	0	4,549
	Actual % reduction	40%	20%	100%	100%	52%	100%	53% <sup>d</sup>
2016	Target reduction	50%	20%	100%	100%	60%	100%	60%
	Harvest	1,005	2,899	0	0	1,467	0	5,762
	Actual % reduction	11%	0%	100%	100%	54%	100%	40% <sup>d</sup>
2017	Target reduction	15%	0%	100%	100%	60%	60%	40–50%
	Harvest	351	1,392	0	0	913	140	2,901
	Actual % reduction	69%	42%	100%	100%	72%	57%	70% <sup>b</sup>

<sup>a</sup> Does not include harvest from the stocked Eklutna Tailrace.

<sup>b</sup> Midseason closures resulted in further harvest reduction than targeted.

<sup>c</sup> Warm water temperatures may have contributed to low fishing success.

<sup>d</sup> Relaxation of restrictions on Deshka and Little Susitna rivers may have resulted in less harvest reduction than targeted.

Table 25.—Preseason and inseason emergency orders (EOs) issued to manage Chinook salmon fisheries in NCIMA, 2012–2018.

Location	Year	Preseason EOs	Inseason EOs
Little Susitna River	2012	Annual 2; single hook only; harvest Fri–Mon (4 days)	Closed Jun 15
	2013	Annual 2; single hook only; harvest Sat–Mon (3 days)	
	2014	Same as 2013	Reinstated 7 days/wk Jul 4
	2015	Same as 2013	Reinstated 7 days/wk Jun 19; restored to regulation Jun 27; liberalized adding bait Jul 3
	2016	Annual 2; single hook only; harvest Fri–Mon (4 days)	Restored to regulation Jun 27; liberalized adding bait Jul 6
	2017	Annual 2 only	Closed July 1
	2018	Annual 2; single hook only; harvest Fri–Mon (4 days)	Restricted to catch and release June 15; closed June 22
Deshka River	2012	Annual 2	Closed Jun 25
	2013	Annual 2; single hook artificial only	Reinstated bait Jun 29
	2014	Same as 2013	Reinstated bait Jun 14
	2015	Same as 2013	Reinstated bait Jun 13; restored to regulation Jun 27
	2016	Annual 2	Restored to regulation Jun 11
	2017	None	Closed to bait June 23; closed July 4
	2018	Catch and release only; single-hook artificial only	Closed June 22
Eastside Susitna area (units 2, 3, 5, 6)	2012	Annual 2; single hook only; harvest through second Monday, then catch-and-release only on weekends	Closed June 25
	2013	Catch-and-release only; single hook only	None
	2014	Same as 2013	None
	2015	Same as 2013	None
	2016	Same as 2013	None
	2017	Same as 2013	Closed July 4
	2018	Closed	None
Yentna River	2012	Annual 2	Closed June 25
	2013	Annual 2; single hook only; harvest Fri–Mon (4 days)	None
	2014	Same as 2013	None
	2015	Same as 2013	None
	2016	Same as 2013	None
	2017	Same as 2013	Closed July 4
	2018	Catch and release only; single hook only	Closed June 22

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Location	Year	Preseason EOs	Inseason EOs
Talachulitna River	2012	Annual 2	Closed June 25
	2013	Catch-and-release only; single hook only	None
	2014	Same as 2013	None
	2015	Same as 2013	None
	2016	Same as 2013	None
	2017	Annual 2; single hook only; harvest Fri–Mon (4 days)	Closed July 4
	2018	Catch and release only; single hook only	Closed June 22

Table 26.—Sport harvest of Chinook salmon from Knik Arm Management Unit (KAMU), 1977–2017.

Year	Little Susitna River	Eklutna tailrace	Other	Total
1977	191	—	16	207
1978	93	—	47	140
1979	800	—	0	800
1980	646	—	0	646
1981	1,418	—	48	1,466
1982	1,467	—	199	1,666
1983	1,187	—	68	1,255
1984	1,883	—	174	2,057
1985	1,845	—	44	1,889
1986	1,457	—	67	1,524
1987	2,282	—	194	2,476
1988	2,822	—	94	2,916
1989	4,204	—	137	4,341
1990	1,965	—	57	2,022
1991	2,102	—	175	2,277
1992	3,920	—	49	3,969
1993	3,441	—	161	3,602
1994	4,204	—	99	4,303
1995	1,698	—	9	1,707
1996	1,484	—	95	1,579
1997	2,938	—	0	2,938
1998	2,031	—	0	2,031
1999	2,713	—	11	2,724
2000	2,802	—	22	2,824
2001	2,243	—	12	2,255
2002	3,144	—	51	3,195
2003	2,138	399	25	2,562
2004	2,362	23	66	2,451
2005	2,724	941	27	3,692
2006	3,303	484	26	3,813
2007	3,210	1,084	32	4,326
2008	2,219	594	30	2,843
2009	1,653	499	0	2,152
2010	889	288	17	1,194
2011	828	184	0	1,012
2012	216	76	0	292
2013	336	159	0	495
2014	437	589	0	1,026
2015	672	956	0	1,628
2016	1,005	1,369	0	2,374
Mean				
1977–2016	1,924	546	51	2,167
2010–2016	533	630	0	1,163
2017	351	551	0	902

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: An en dash means data not available.

Table 27.—Escapement of Chinook salmon, KAMU, 1977–2018.

Year	Little Susitna River		Moose Creek <sup>a</sup>
	Weir	Aerial	
1979	ND	<sup>b</sup>	253
1980	ND	<sup>b</sup>	<sup>b</sup>
1981	ND	<sup>b</sup>	238
1982	ND	<sup>b</sup>	406
1983	ND	929	452
1984	ND	558	541
1985	ND	1,005	475
1986	ND	<sup>b</sup>	419
1987	ND	1,386	957
1988	7,374	3,197	1,072
1989	4,367	<sup>b</sup>	999
1990	ND	922	545
1991	ND	892	704
1992	ND	1,441	959
1993	ND	<sup>b,c</sup>	175 <sup>d</sup>
1994	2,981	1,221 <sup>c</sup>	894
1995	2,809	1,714 <sup>c</sup>	488
1996	ND	1,079 <sup>c</sup>	652
1997	ND	<sup>b,c</sup>	652
1998	ND	1,091 <sup>c</sup>	214
1999	ND	<sup>b,c</sup>	744
2000	ND	1,094 <sup>c</sup>	198
2001	ND	1,238 <sup>c</sup>	275
2002	ND	1,660 <sup>c</sup>	310
2003	ND	1,114 <sup>c</sup>	471
2004	ND	1,694 <sup>c</sup>	197
2005	ND	2,095 <sup>c</sup>	254
2006	ND	1,855 <sup>c</sup>	216
2007	ND	1,731 <sup>c</sup>	330
2008	ND	1,297 <sup>c</sup>	384
2009	ND	1,028 <sup>c</sup>	201
2010	ND	589 <sup>c</sup>	142
2011	ND	887 <sup>c</sup>	175
2012	ND	1,154 <sup>c</sup>	163
2013	2,379 <sup>f</sup>	1,651 <sup>c</sup>	257
2014	3,135	1,759 <sup>c</sup>	299
2015	4,902	1,507 <sup>c</sup>	<sup>b</sup>
2016	4,969	1,622 <sup>c</sup>	<sup>b</sup>
2017	2,531	1,192 <sup>c</sup>	<sup>b</sup>
Mean			
1983–2017	4134	1,353	463
2008–2017	3884	1,269	232
2013–2017	3884	1,546	278
2018	936 <sup>g,h</sup>	530	108

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*Note:* ND means no data.

<sup>a</sup> Foot survey (1977–1994); helicopter survey (1995–2016).

<sup>b</sup> No count conducted; water too turbid.

<sup>c</sup> Biological Escapement Goal (BEG) is 850 fish.

<sup>d</sup> Late count.

<sup>e</sup> Sustainable Escapement Goal (SEG) is 900–1,800 fish.

<sup>f</sup> Incomplete count due to high water.

<sup>g</sup> Estimated weir passage (95% CI 697–1,253 fish). Weir was down June 11–July 1

<sup>h</sup> Sustainable escapement goal (SEG) 2,100–4,300 fish.



Table 28.—Chinook salmon smolt stocked and adult sport fish harvest at Eklutna Tailrace from 2002–2018.

Year	Brood year	Total smolt released	Mark type <sup>a</sup>	Mean weight (g)	Release date	Brood stock	Hatchery	Harvest
2002	2001	106,991	TM	11.3	20 May	Ship Creek	Elmendorf	0
2003	2002	218,492	TM	12.8 <sup>b</sup> 12.0 <sup>b</sup>	3–4 June	Ship Creek	Ft. Richardson	399
2004	2002 <sup>c</sup>	215,165	TM	13.4	19 May	Ship Creek	Ft. Richardson	23
2005	2003 <sup>c</sup>	164,586	TM	14.0	1 Jun	Ship Creek	Ft. Richardson	941
2006	2004 <sup>c</sup>	213,250	TM	10.6	31 May–1 Jun	Ship Creek	Ft. Richardson	484
2007	2005 <sup>c</sup>	110,978	TM	8.9	30 May	Ship Creek	Ft. Richardson	1,084
2008	2006 <sup>c</sup>	114,136	TM	9.1	27 May	Ship Creek	Ft. Richardson	594
2009	2007 <sup>c</sup>	77,785	TM	7.1	8 Jun	Ship Creek	Ft. Richardson	499
2010	2008 <sup>c</sup>	152,014	TM	9.1	19 Jun	Ship Creek	Ft. Richardson	168
2011	2009 <sup>c</sup>	122,962	TM	11.0	31 May	Ship Creek	Ft. Richardson	184
2012	2011	160,347	TM	13.5	29 May	Ship Creek	WJHSFH	76
2013	2012	94,609	TM	15.9	18 Jun	Ship Creek	WJHSFH	159
2014	2013	424,000	TM	14.0	15 Jun	Deception Creek	WJHSFH	589
2015	2014	424,000	TM	14.0	18 Jun	Deception Creek	WJHSFH	956
2016	2015	425,247	TM	14.0	18 Jun	WJHSFH	WJHSFH	1,369
2017	2016	422,835	TM	14.0	19 Jun	WJHSFH	WJHSFH	551
2018	2017	432,369	TM	14.0	22 Jun	WJHSFH	WJHSFH	ND

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: WJHSFH means William Jack Hernandez Sport Fish Hatchery. ND means data not available from SWHS.

<sup>a</sup> TM means thermal mark.

<sup>b</sup> In 2003, there were two release groups. Of the total smolt released, 50.05% were in a release group with mean weight 12.8 g and 49.95% were in a release group with mean weight 12.0 g

<sup>c</sup> Cold water rearing conditions required growth over 2 winters to reach optimal release size.

Table 29.—Sport harvest of Chinook salmon from the NCIMA management units: Eastside Susitna River, Westside Susitna River, West Cook Inlet, and Knik Arm drainages, 1979–2017.

Year	Eastside Susitna River			Westside Susitna River	West Cook Inlet	Knik Arm	Total
	Hatchery	Nonhatchery	Total				
1979			1,298	5,768	98	800	7,964
1980			1,370	6,148	34	646	8,198
1981			2,202	4,742	192	1,466	8,602
1982			2,063	8,573	147	1,666	12,449
1983			2,852	9,568	1,185	1,255	14,860
1984			4,428	12,106	1,833	2,057	20,424
1985			4,342	13,644	2,029	1,889	21,904
1986			8,569	13,402	2,378	1,524	25,873
1987			8,603	13,350	1,477	2,476	25,906
1988	355	8,784	9,139	15,970	1,695	2,916	29,720
1989	1,079	8,704	9,783	19,343	2,325	4,341	35,792
1990	1,194	8,229	9,423	17,425	2,097	2,022	30,967
1991	844	8,239	9,083	21,836	762	2,277	33,958
1992	4,566	16,741	21,307	18,737	1,213	3,969	45,226
1993	3,977	18,711	22,688	21,142	1,955	3,602	49,387
1994	2,703	12,267	14,970	10,248	1,583	4,303	31,104
1995	1,111	6,761	7,872	6,265	693	1,707	16,537
1996	1,205	9,818	11,023	5,879	1,358	1,579	19,839
1997	1,091	9,898	10,989	7,799	894	2,938	22,620
1998	902	9,570	10,472	9,716	693	2,031	22,912
1999	2,464	14,411	16,875	12,131	1,073	2,724	32,803
2000	1,776	9,998	11,774	17,341	1,163	2,824	33,102
2001	2,057	11,447	13,504	13,914	722	2,255	30,395
2002	1,720	8,975	10,695	11,357	1,227	3,195	26,474
2003	1,605	7,894	9,499	15,035	1,124	2,562	28,220
2004	969	7,285	8,254	15,694	795	2,556	27,299
2005	981	7,472	8,453	15,945	592	3,692	28,682
2006	<sup>a</sup>	7,339	7,339	16,454	1,038	3,813	28,644
2007	<sup>a</sup>	8,337	8,337	11,370	1,380	4,326	25,413
2008	<sup>a</sup>	5,834	5,834	6,805	437	2,843	15,919
2009	<sup>a</sup>	3,462	3,462	4,713	829	2,152	11,156
2010	<sup>a</sup>	2,274	2,274	6,306	854	1,076	10,510
2011	<sup>a</sup>	2,710	2,710	5,914	76	1,012	9,712
2012	<sup>a</sup>	203	203	2,525	0	292	3,020
2013	<sup>a</sup>	18	18	2,427	0	495	2,940
2014	<sup>a</sup>	31	31	2,018	130	1,026	3,205
2015	<sup>a</sup>	258	258	3,619	122	1,628	5,627
2016	<sup>a</sup>	258	401	4,366	35	2,374	7,176
Mean							
2012–2016		182	182	2,991	57	1,163	4,394
2017	<sup>a</sup>	0	0	2,550	41	902	3,493

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

<sup>a</sup> Hatchery contribution no longer available. Creel program concluded in 2005.

Table 30.—Contribution of hatchery-reared Chinook salmon to the sport harvest at Willow Creek and the escapements at Willow and Deception creeks, 2005–2018.

Year	Brood year (age)	Willow Creek						Deception Creek		
		Harvest <sup>a</sup>			Escapement <sup>b</sup>			Escapement <sup>b</sup>		
		<i>n</i>	# Recovered	Contrib. <sup>c</sup>	<i>n</i>	# Recovered	Contrib. <sup>c</sup>	<i>n</i>	# Recovered	Contrib. <sup>c</sup>
2005										
	2000 (0.4)		63	7.0%		0	0.0%		ND	ND
	2001 (0.3)		272	29.9%		2	0.9%		ND	ND
	2002 (0.2)		6	0.7%		0	0.0%		ND	ND
	2002 (1.1)		2	0.2%		0	0.0%		ND	ND
	2003 (0.1)		18	2.0%		0	0.0%		ND	ND
	Total	965	361	39.8% <sup>d</sup>	331	2	0.9% <sup>d</sup>	174	113	64.9% <sup>e</sup>
2006 <sup>f</sup>										
	2001 (0.4)		ND	ND		1	0.4%		ND	ND
	2002 (0.3)		ND	ND		0	0.0%		ND	ND
	2003 (1.1)		ND	ND		1	0.4%		ND	ND
	2003 (0.1)		ND	ND		1	0.4%		ND	ND
	Total	ND	ND	ND	277	3	1.1% <sup>d</sup>	248	151	60.9% <sup>e</sup>
2007										
	2003 (1.2)		ND	ND		1	0.7%			
	Total	ND	ND	ND	274	1	0.7% <sup>d</sup>	258	175	67.8% <sup>e</sup>
2008		ND	ND	ND	118	3	2.5%	156	105	67.3% <sup>e</sup>
2009		ND	ND	ND	117	4	3.4%	96	46	50.0% <sup>e</sup>
2010		ND	ND	ND	104	2	1.9%	25	7	28.0% <sup>e</sup>
2011		ND	ND	ND	101	1	1.0%	8	4	50.0% <sup>e</sup>
2012		ND	ND	ND	66	3	4.5%	44	9	20.5% <sup>e</sup>
2013		ND	ND	ND	139	1	0.7%	330	47	14.2% <sup>e</sup>
2014		ND	ND	ND	102	1	1.0%	160	74	46.3% <sup>e</sup>
2015		ND	ND	ND	102	2	2.0%	261	75	28.7% <sup>e</sup>
2016		ND	ND	ND	101	61	60.4%	122	100	82.0% <sup>e</sup>
2017		ND	ND	ND	100	2	2.0%	271	206	76.0%
2018		ND	ND	ND	97	1	1.0%	168	70	41.7%

-continued-

Table 30.—Page 2 of 2.

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*Source:* ADF&G unpublished staff foot survey data.

*Note:* *n* is total number of fish sampled; # Recovered is number of adipose finclipped (hatchery-reared) fish with coded wire tags recovered at the ADF&G Mark, Tag, and Age Lab; Contrib. is percent contribution; and ND is no data because no attempts were made to collect it.

<sup>a</sup> Creel survey.

<sup>b</sup> Carcass sampling.

<sup>c</sup> Percent contribution may differ from the quotient of number recovered to number sampled due to head or tag loss.

<sup>d</sup> Sum of contribution by brood year. Tags from the heads of adipose finclipped fish were decoded at the ADF&G Mark, Tag, and Age Lab in Juneau, AK.

<sup>e</sup> The ratio of adipose finclipped (marked) fish to total fish inspected during a carcass survey.

<sup>f</sup> The Willow Creek creel survey was discontinued in 2006; no sport fish harvests on this stream were sampled that year.

Table 31.—Number of Chinook salmon smolt stocked in Willow Creek drainage, 1996–2018.

Brood year	Release date	Release location <sup>a</sup>	Total number released	Number coded wire tagged	Mean weight (g)
1996	11–20 Jun 1997	Deception Creek	209,944	207,973	12.2
1997	17–26 Jun 1998	Deception Creek	197,392	195,615	11.5
1998	14, 16–17 Jun 1999	Deception Creek	201,586	199,772	11.5
1999 <sup>b</sup>	2, 13–14 Jun 2000	Deception Creek	7,500		
		Deception Creek	198,996		
		Total	206,946	205,051	12.6
2000	18–19 Jun 2001	Deception Creek	207,465	204,560	14.2
2001	21,24 Jun 2002	Deception Creek	197,277	196,608	12.1
2002	19 Jun 2003	Deception Creek	100,635	101,407	14.5
	8 Jun 2004	Deception Creek	113,523	104,101	12.2
		Total	214,158	205,508	
2003	9 Jun 2004	Deception Creek	99,047	97,660	15.7
	6 Jun 2005	Deception Creek	163,016	162,415	12.6
		Total	262,063	260,075	
2004	8 Jun 2006	Deception Creek	50,426	50,376	12.5
2005	29 May 2007	Deception Creek	103,016	103,016	9.5
2006	16 Jun 2008	Deception Creek	112,219	111,321	11.0
2007	4 Jun 2009	Deception Creek	111,322	111,322	6.8
2008	27 May 2010	Deception Creek	155,125	155,125	8.4
2009	6 Jul 2011	Deception Creek	47,428	47,428 <sup>c</sup>	12.7
	6 Jul 2011	Deception Creek	92,838	0 <sup>c</sup>	12.4
		Total	140,266		
2010	9 Jul 2012	Deception Creek	151,220		17.0
2012	12 Jun 2013	Deception Creek	149,041	149,041 <sup>c</sup>	17.0
2013	20 Jun 2014	Deception Creek	211,812	0 <sup>c</sup>	14.2
2014	11, 18 Jun 2015	Deception Creek	214,495	211,707	14.4
2015	13 Jun 2016	Deception Creek	69,933	69,933 <sup>c</sup>	14.2
2016	14 Jun 2017	Deception Creek	100,724	100,724	14.0
2017	13 Jun 2018	Deception Creek	211,168	211,168 <sup>c</sup>	14.0

Source: ADF&G unpublished hatchery records.

<sup>a</sup> Prior to 1996, the Deception Creek release site was at the mouth of Deception Creek. Beginning in 1996, the release site was at the Four Mile Road crossing.

<sup>b</sup> In 2000, the stocking truck got stuck on Four Mile Road. Approximately 7,500 smolt were bucketed to Deception Creek at Four Mile Road, the remaining smolt were released at Hatcher Pass Road Bridge near the mouth of Deception Creek.

<sup>c</sup> Number of fish adipose finclipped and thermal marked.

Table 32.—Eastside Susitna River Management Unit Chinook salmon harvest by fishery, 1977–2017.

Year	Willow Creek	Little Willow Creek	Kashwitna River	Caswell Creek	Sheep Creek	Goose Creek	Montana Creek	Birch Creek	Sunshine Creek	Talkeetna River <sup>a</sup>	Other <sup>b</sup>	Total
1977	137	16			259		415			25	204	1,056
1978	47	0			256		408			12	163	886
1979	459	0		156	10		312		10	312	39	1,298
1980	289	32		215	45		559		13	172	45	1,370
1981	585	0		249	0		661		57	373	277	2,202
1982	629	0		471	0	0	241	0	52	450	220	2,063
1983	534	0	231	272	0	0	504	0	105	934	272	2,852
1984	774	37	0	586	0	0	1,522	0	125	1,272	112	4,428
1985	1,063	25		527	0	0	979	0	771	871	106	4,342
1986	1,017	872	73	327	1,778	145	2,796	290	327	908	36	8,569
1987	1,987	711	116	88	1,610	334	1,726	44	319	1,639	29	8,603
1988	2,349	937	0	578	1,847	218	1,070	28	303	1,762	47	9,139
1989	2,846	507	11	357	1,116	385	1,708	28	368	2,372	85	9,783
1990	3,237	387	6	330	1,537	504	478	0	465	2,358	121	9,423
1991	3,208	684	41	305	1,519	288	575	47	230	2,025	161	9,083
1992	8,884	1,023	16	592	2,663	1,033	3,078	101	365	3,338	214	21,307
1993	8,626	1,200	38	531	2,300	633	4,054	9	280	4,729	288	22,688
1994	5,980	745	78	562	1,349	361	3,111	108	297	2,144	235	14,970
1995	2,742	436	18	397	746	226	1,004	0	132	2,126	45	7,872
1996	2,690	896	21	128	1,397	437	1,612	22	53	3,585	182	11,023
1997	3,135	699	10	30	550	298	2,181	30	53	3,800	203	10,989
1998	2,793	546	15	226	700	348	1,471	83	116	3,846	328	10,472
1999	4,988	1,344	83	142	2,558	371	3,279	134	11	3,701	264	16,875
2000	3,782	578	160	561	851	258	1,728	223	472	2,740	421	11,774
2001	4,573	941	74	238	1,420	160	2,646	65	93	2,866	428	13,504
2002	3,591	580	217	115	928	403	2,026	35	38	2,616	146	10,695
2003	3,922	510	373	26	1,284	350	1,242	167	154	1,276	195	9,499
2004	2,818	445	125	23	914	335	1,071	0	25	2,473	315	8,544
2005	2,466	621	112	394	878	150	1,328	287	205	1,960	52	8,453

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Year	Willow Creek	Little Willow Creek	Kashwitna River	Caswell Creek	Sheep Creek	Goose Creek	Montana Creek	Birch Creek	Sunshine Creek	Talkeetna River <sup>a</sup>	Other <sup>b</sup>	Total
2006	2,141	449	210	264	707	27	1,672	97	211	1,561	0	7,339
2007	2,258	870	223	190	964	31	1,294	0	0	2,476	31	8,337
2008	1,101	505	237	30	589	134	1,188	46	431	1,479	94	5,834
2009	499	85	212	17	393	0	257	0	0	1,982	210	3,655
2010	218	169	214	0	153	0	371	26	56	1,013	368	2,588
2011	282	33	172	0	213	0	362	0	16	1,087	545	2,710
2012	13	0	8	0	0	0	13	0	0	113	56	203
2013	0	0	0	0	0	0	0	0	0	0	18	18
2014	0	0	0	0	0	0	0	0	0	0	31	31
2015	0	0	0	0	0	0	0	0	0	0	258	258
2016	0	0	0	0	0	0	0	0	0	0	401	401
Mean												
2012–2016	3	0	2	0	0	0	3	0	0	23	153	182
2017	0	0	0	0	0	0	0	0	0	0	0	0

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: Blanks indicate no data available.

<sup>a</sup> Talkeetna River and tributaries including Clear Creek.

<sup>b</sup> Includes lakes and streams.

Table 33.—Northern Cook Inlet Management Area Chinook salmon escapement index counts (aerial), 1979–2018.

Year	Susitna River			Knik Arm	West Cook Inlet	NCIMA total
	Eastside	Westside	Total			
1979	5,082	39,552	44,634	253	2,540	47,427
1980	No data					
1981	7,419	2,025	9,444	238	3,601	13,283
1982	10,700	25,224	35,924	406	7,384	43,714
1983	17,859	42,850	60,709	1,381	5,562	67,652
1984	25,678	27,974	53,652	1,099	5,043	59,794
1985	18,177	38,932	57,109	1,480	4,619	63,208
1986	15,828	32,330	48,158	419	6,114	54,691
1987	26,535	23,936	50,471	2,343	2,423	55,237
1988	26,255	40,963	67,218	4,269	5,546	77,033
1989	23,117	4,818	27,935	999	2,468	31,402
1990	25,040	28,042	53,082	1,467	1,329	55,878
1991	21,773	19,425	41,198	1,596	1,348	44,142
1992	15,782	18,899	34,681	2,400	2,835	39,916
1993	13,066	18,028	31,094	175	3,882	35,151
1994	11,904	9,423	21,327	2,115	2,121	25,563
1995	21,778	15,828	37,606	2,202	2,223	42,031
1996	22,084	16,802	38,886	1,731	2,392	43,009
1997	35,927	38,437	74,364	652	5,087	80,103
1998	24,393	32,958	57,351	1,305	4,805	63,461
1999	24,306	30,260	54,566	744	7,812	63,122
2000	20,161	11,137	31,298	1,292	3,964	36,554
2001	23,047	15,102	38,149	1,513	4,394	44,056
2002	35,137	28,066	63,203	1,970	3,649	68,822
2003	15,341	24,294	39,635	1,585	4,974	46,194
2004	22,567	54,421	76,988	1,891	5,038	83,917
2005	21,780	27,774	49,554	2,349	2,730	54,633
2006	16,934	23,074	40,008	2,071	4,206	46,285
2007	23,229	18,645	41,874	2,061	2,439	46,374
2008	10,789	5,609	16,398	1,681	1,051	19,130
2009	12,686	9,971	22,657	1,229	1,622	25,508
2010	7,449	3,293	10,742	731	993	12,466
2011	8,936	13,324	22,260	1,062	659	23,981
2012	6,388	4,148	10,536	1,317	972	12,825
2013	11,979	18,602	30,581	1,908	2,487	34,976
2014	10,117	9,256	19,373	2,058	2,182	23,613
2015	12,106	11,880	23,986	1,507	2,851	28,344
2016	6,360	9,879	16,239	1,622	1,440	19,301
2017	5,994	3,337	9,331	1,192	565	11,088
Mean						
1979–2017	17,466	21,014	39,118	1,482	3,299	43,260
2008–2017	9,280	10,461	18,210	1,431	1,482	21,123
2013–2017	9,311	10,591	19,902	1,657	1,905	23,464
2018	5,285	7,255	12,540	530	957	14,027

Source: Unpublished ADF&G aerial survey data.

Note: NCIMA means Northern Cook Inlet Management Area.



Table 34.—Eastside Susitna River Management Unit Chinook salmon escapement index counts (aerial), 1979–2018.

Year	Deception Creek		Little Willow Creek		Sheep Creek	Goose Creek	Montana Creek	Clear Creek	Prairie Creek	Chulitna River	Portage Creek	Indian River	Kash-witna River	Other <sup>b</sup>	Total
	Willow Creek <sup>a</sup>	Total	Non-hatchery	Willow Creek											
1979	848	239		327	778	<sup>c</sup>	1,094 <sup>d</sup>	864	<sup>c</sup>	<sup>c</sup>	190	285	457	<sup>c</sup>	5,082
1980															
1981	991	366		459	1,013	262	814	<sup>c</sup>	1,875	<sup>c</sup>	659	422	558	<sup>c</sup>	7,419
1982	592	229 <sup>e</sup>		316	527	140	887 <sup>d</sup>	982	3,844	863	1,111	1,053	156	268	10,700
1983	777	121 <sup>e</sup>		1,042	975	477	1,641 <sup>d</sup>	938	3,200	4,058	3,140	1,193	297	<sup>c</sup>	17,859
1984	2,789	675 <sup>e</sup>			1,028	258	2,309 <sup>d</sup>	1,520	9,000	4,191	2,341	1,456	111	<sup>c</sup>	25,678
1985	1,856	1,044 <sup>e</sup>		1,305	1,634	401	1,767 <sup>d</sup>	2,430	6,500	783	<sup>f</sup>	<sup>f</sup>	457	4,066	18,177
1986	2,059	521 <sup>e</sup>	364	2,133	1,285	630	<sup>c</sup>	<sup>c</sup>	8,500	<sup>c</sup>	<sup>c</sup>	<sup>c</sup>	700	<sup>c</sup>	15,828
1987	2,768	692 <sup>e</sup>	518	1,320	895	416	1,320 <sup>d</sup>	<sup>c</sup>	9,138	5,252	2,616	1,246	872	<sup>c</sup>	26,535
1988	2,496	790 <sup>e</sup>	537	1,515	1,215	1,076	2,016 <sup>d</sup>	4,850	9,280	<sup>c</sup>	1,402	456	1,159	<sup>c</sup>	26,255
1989	5,060	800 <sup>e</sup>	623	1,325	610	835	2,701 <sup>d</sup>	<sup>c</sup>	9,463	<sup>c</sup>	1,309	659	355	<sup>c</sup>	23,117
1990	2,365	700 <sup>e</sup>	420	1,115	634	552	1,269	2,380	9,113	2,681	1,886	1,473	872	<sup>c</sup>	25,040
1991	2,006	747 <sup>e</sup>	515	498	154 <sup>g</sup>	968	1,215	1,974	6,770	4,410	1,223	1,468	340	<sup>c</sup>	21,773
1992	1,660	983 <sup>e</sup>	423	673	<sup>c</sup>	369	1,560	1,530	4,453	2,527	1,078	479	470	<sup>c</sup>	15,782
1993	2,227	1,011 <sup>e</sup>	502	705	<sup>c</sup>	347	1,281	886	3,023	2,070	629	362	525	<sup>c</sup>	13,066
1994	1,479	766	388	712	542	375	1,143	1,204	2,254	1,806	857	336	430	<sup>c</sup>	11,904
1995	3,792	834	445	1,210	1,049	374	2,110	1,928	3,884	3,460	1,505	796	836	<sup>c</sup>	21,778
1996	1,776	1,211	654	1,077	1,028	305	1,841	2,091	5,037	4,172	2,185	579	782	<sup>c</sup>	22,084
1997	4,841	1,340	<sup>c</sup>	2,390	<sup>c</sup>	308	3,073	5,100	7,710	5,618	3,086	1,700	761	<sup>c</sup>	35,927
1998	3,500	1,273	699	1,782	1,160	415	2,936	3,894	4,465	2,586	1,261	502	619	<sup>c</sup>	24,393
1999	2,081	1,000	801	1,837	<sup>c</sup>	268	2,088	2,216	5,871	5,455	1,797	1,049	644	<sup>c</sup>	24,306
2000	2,601	1,563	828	1,121	1,162	348	1,271	2,142	3,790	4,218	1,015	601	329	<sup>c</sup>	20,161
2001	3,188	1,975	943	2,084	<sup>c</sup>	<sup>c</sup>	1,930	2,096	5,191	2,353 <sup>g</sup>	2,334	1,292	604	<sup>c</sup>	23,047
2002	2,758	1,000	123	1,680	854	565	2,357	3,496	7,914	9,002	3,336	1,126	1,049	<sup>c</sup>	35,137
2003	3,964	914	288	879	<sup>c</sup>	175	2,576	<sup>c</sup>	4,095	<sup>c</sup>	827 <sup>d</sup>	1,365	546	<sup>c</sup>	15,341
2004	2,985	480	170	2,227	285	417	2,117	3,417	5,570	2,162	1,972	593	342	652	22,567
2005	2,463	1,806	634	1,784	760	468	2,600	1,924	3,862	2,838	2,151	670	454	83	21,780

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Year	Willow Creek <sup>a</sup>	Deception Creek		Little Willow Creek	Sheep Creek	Goose Creek	Montana Creek	Clear Creek	Prairie Creek	Chulitna River	Portage Creek	Indian River	Kash-witna River	Other <sup>b</sup>	Total
		Total	Non-hatchery												
2006	2,217	940	368	816	580	306	1,850	1,520	3,570	2,862	942	718	613		16,934
2007	1,373	604	194	1,103	400	105	1,936	3,310	5,036	5,166	2,284	1,017	895		23,229
2008	1,255 <sup>g</sup>	255 <sup>g</sup>		<sup>c</sup>	<sup>c</sup>	117	1,357	1,795	3,039	2,514	169	288	<sup>c</sup>		10,789
2009	1,133	<sup>c</sup>		776	500	65 <sup>h</sup>	1,460	1,205	3,500	2,093	1,228	409	317		12,686
2010	1,173	<sup>c</sup>		468	<sup>c</sup>	76 <sup>h</sup>	755	903	3,022	1,052			<sup>c</sup>		7,449
2011	1,061	180		713	350	80	494	512	2,038	1,875	1,217	282	134		8,936
2012	756	349		494	363	57	416	1,177	1,185	667	501	338	85		6,388
2013	1,752	350		858	<sup>c</sup>	62	1,304	1,471	3,304	1,262	868	332	234		11,797
2014	1,335	688		684	262	232	953	1,390	2,812	1,011		558	88	104	10,013
2015	2,046	<sup>c</sup>		788	<sup>c</sup>	<sup>c</sup>	1,416	1,205	3,209	3,137	<sup>c</sup>	<sup>c</sup>	224	0	12,106
2016	1,814	<sup>c</sup>		675	<sup>c</sup>	<sup>c</sup>	692	<sup>c</sup>	1,853	1,151	<sup>c</sup>	242	203	0	6,630
2017	1,329			840	<sup>c</sup>	148	603	780	1,930	<sup>c</sup>	545	203	161		5,994
Mean															
1979–2017	2,136	801	497	1,104	771	353	1,599	1,973	4,821	3,010	1,490	751	491	647	17,020
2008–2017	1,365	364	0	700	369	105	945	1,160	2,597	1,640	755	332	181	26	9,289
2013–2017	1,655	519	0	769	262	147	994	1,212	2,638	1,640	707	334	182	35	9,329
2018	411	<sup>c</sup>		280	334	90	473	940	1,194	1,125	429	326	112	0	5,285
SEG <sup>i</sup>	1,600– 2,800		350–700 <sup>j</sup>	450– 1,800	600– 1,200	250– 650	1,100– 3,100	950– 3,400	3,100– 9,200	1,800– 5,100					

Source: ADF&G staff surveys.

<sup>a</sup> Includes hatchery fish.

<sup>b</sup> May include Honolulu, Byers, Troublesome, Bunco, Birch, Sunshine, Larson creeks.

<sup>c</sup> No counts conducted due to poor water visibility.

<sup>d</sup> Foot survey.

<sup>e</sup> Combination of foot surveys and weir counts.

<sup>f</sup> Included with other streams.

<sup>g</sup> Poor count due to timing, poor visibility, or weather conditions.

<sup>h</sup> Beaver dam blocks fish passage.

<sup>i</sup> SEG = sustainable escapement goal.

<sup>j</sup> Deception Creek SEG discontinued after 2005.

Table 35.—Westside Susitna River drainage Chinook salmon harvest by fishery, 1977–2017.

Year	Alexander Creek	Deshka River	Rabideux Creek	Yentna River	Peters Creek	Lake Creek	Fish Creek <sup>a</sup>	Talachulitna River	Other streams <sup>b</sup>	Other lakes <sup>b</sup>	Total
1977	820	1,017				464		224	413	0	2,938
1978	769	850				326		12	82	0	2,039
1979	712	2,811				1,796		293	156	0	5,768
1980	1,438	3,685				775		121	129	0	6,148
1981	1,121	2,769				795		57	0	0	4,742
1982	2,506	4,307				1,645		0	115	0	8,573
1983	1,711	4,889				2,423		336	209	0	9,568
1984	2,107	5,699			112	2,881		424	709	174	12,106
1985	2,761	6,407				2,575		224	1,677	0	13,644
1986	2,937	6,490				2,134	647	201	948	45	13,402
1987	2,224	5,632				3,282	834	116	1,252	10	13,350
1988	4,687	5,474			549	2,784	729	909	829	9	15,970
1989	4,882	8,062	12	215	339	3,554	1,202	403	656	18	19,343
1990	5,119	6,161	55	178	385	3,423	740	709	631	24	17,425
1991	6,548	9,306		301	495	2,712	660	848	942	24	21,836
1992	4,124	7,256	23	652	655	3,668	879	445	867	168	18,737
1993	5,154	5,682		653	283	6,425	1,148	875	922	0	21,142
1994	3,070	624		402	202	3,548	930	927	545	0	10,248
1995	1,217	0		425	252	2,838	545	509	479	0	6,265
1996	1,005	11		320	74	2,587	415	697	770	0	5,879
1997	1,470	42		315	34	3,777	557	778	826	0	7,799
1998	1,275	3,384		350		2,511	840	563	793	0	9,716
1999	2,241	3,496		939	197	3,037	1,188	977	56	0	12,131
2000	2,721	7,076		838	236	4,611	742	695	422	0	17,341
2001	2,313	5,007		648	88	4,067	965	409	417	0	13,914
2002	1,992	4,508		559	52	2,878	761	508	99	0	11,357
2003	2,293	6,605		277	122	4,467	371	587	313	0	15,035
2004	1,294	9,050	12	523	85	3,657	390	344	293	0	15,648
2005	1,052	7,332		963	0	4,508	307	800	915	68	15,945

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Table 35.–Page 2 of 2.

Year	Alexander Creek	Deshka River	Rabideux Creek	Yentna River	Peters Creek	Lake Creek	Fish Creek <sup>a</sup>	Talachulitna River	Other streams <sup>b</sup>	Other lakes <sup>b</sup>	Total
2006	1,396	7,753	40	1,964	33	4,070	103	452	643	0	16,454
2007	412	5,696	0	827	465	2,881	68	1021	0	0	11,370
2008	0	2,036	0	1,009	220	2,756	89	435	260	0	6,805
2009	0	723	35	863	148	2,273	174	258	239	0	4,713
2010	0	3,381	16	722	36	1,644	41	323	143	16	6,322
2011	0	3,139	10	834	61	1,392	51	393	34	0	5,914
2012	0	1,650	0	118	0	602	0	17	138	0	2,525
2013	0	1,087	0	115	29	1,088	0	0	108	0	2,427
2014	0	1,329	0	36	81	572	0	0	0	0	2,018
2015	0	1,927	0	402	159	911	72	0	148	0	3,619
2016	0	2,899	0	201	49	1,217	0	0	0	0	4,366
Mean											
2012–2016	0	1,778	0	174	64	878	14	3	79	0	2,991
2017	0	1,392	0	209	0	649	55	140	105	0	2,550

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019).

Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data available.

<sup>a</sup> Fish Lake drainage (Yentna River drainage).

<sup>b</sup> May include harvest from West Cook Inlet waters through 1998.

Table 36.—Westside Susitna River Management Unit Chinook salmon escapement index counts, 1979–2018.

Year	Alexander Creek	Deshka River		Peters Creek	Lake Creek	Talachulitna		Other streams <sup>b</sup>	Aerial total
		Aerial index	Weir <sup>a</sup>			River	Cache Creek		
1979	6,215	27,385	NA	108	4,196	1,648	<sup>c</sup>	ND	39,552
1980	<sup>c</sup>	<sup>c</sup>	NA	<sup>c</sup>	<sup>c</sup>	<sup>c</sup>	<sup>c</sup>	ND	ND
1981	<sup>c</sup>	<sup>c</sup>	NA	<sup>c</sup>	<sup>c</sup>	2,025	<sup>c</sup>	ND	2,025
1982	2,546	16,000	NA	<sup>c</sup>	3,577	3,101	<sup>c</sup>	ND	25,224
1983	3,755	19,237	NA	2,272	7,075	10,014	497	ND	42,850
1984	4,620	16,892	NA	324	<sup>c</sup>	6,138	<sup>c</sup>	ND	27,974
1985	6,241	18,151	NA	2,901	5,803	5,145	206	485	38,932
1986	5,225	21,080	NA	1,915	<sup>c</sup>	3,686	424	ND	32,330
1987	2,152	15,028	NA	1,302	4,898	<sup>c</sup>	556	ND	23,936
1988	6,273	19,200	NA	3,927	6,633	4,112	818	ND	40,963
1989	3,497	<sup>c</sup>	NA	959	<sup>c</sup>	<sup>c</sup>	362	ND	4,818
1990	2,596	18,166	NA	2,027	2,075	2,694	484	ND	28,042
1991	2,727	8,112 <sup>d</sup>	NA	2,458	3,011	2,457	499	161	19,425
1992	3,710	7,736	NA	996	2,322	3,648	487	ND	18,899
1993	2,763	5,769	NA	1,668	2,869	3,269	1,690	ND	18,028
1994	1,514	2,665	NA	573	1,898	1,575	628	570	9,423
1995	2,090	5,150	10,048	1,041	3,017	2,521	1,601	408	15,828
1996	2,319	6,343	14,349	749	3,514	2,748	581	548	16,802
1997	5,598	19,047	35,587	2,637	3,841	4,494	1,774	1,046	38,437
1998	2,807	15,556	15,409 <sup>e</sup>	4,367	5,056	2,759	1,771	642	32,958
1999	3,974	12,904	29,649	3,298	2,877	4,890	1,720	597	30,260
2000	2,331 <sup>d</sup>	<sup>c</sup>	35,242	1,648	4,035	2,414	709	ND	11,137
2001	2,282	<sup>c</sup>	29,004	4,226	4,661	3,309	624	ND	15,102
2002	1,936	8,749	29,428	2,959	4,852	7,824	671	1,075	28,066
2003	2,012	<sup>c</sup>	39,496	3,998	8,153	9,573	558	ND	24,294
2004	2,215	28,778	57,934	3,757	7,598	8,352	212	3,509	54,421
2005	2,140	11,495	37,725	1,508	6,345	4,406	1,460	420	27,774

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Table 36.—Page 2 of 2.

Year	Alexander Creek	Deshka River		Peters Creek	Lake Creek	Talachulitna River	Cache Creek	Other streams <sup>b</sup>	Aerial total
		Aerial index	Weir <sup>a</sup>						
2006	885	6,499 <sup>d</sup>	31,150	1,114	5,300	6,152	1,230	1,894	23,074
2007	480	6,712	18,714	1,225	4,081	3,871	551	1,725	18,645
2008	150 <sup>d</sup>	<sup>c</sup>	7,533	<sup>c</sup>	2,004	2,964	<sup>c</sup>	491	5,609
2009	275	3,954	11,967	1,283	1,394	2,608	<sup>c</sup>	457	9,971
2010	177	<sup>c</sup>	18,594	<sup>c</sup>	1,617	1,499	<sup>c</sup>	209	3,502
2011	343	7,522	18,968	1,103	2,563	1,368	27	398	13,324
2012	181	0	14,096	459	2,366	847	87	440	4,380
2013	588	8,686	18,297	1,643	3,655	2,285	582	1,163	18,602
2014	911	<sup>c</sup>	16,335	1,443	3,506	2,256	475	1,064	9,655
2015	1,117	<sup>c</sup>	24,316	1,514	4,686	2,582	363	1,618	11,880
2016	754	<sup>c</sup>	22,874	1,122	3,588	4,295	120	ND	9,879
2017	170	<sup>c</sup>	11,383	307	1,601	1,087	9	163	3,337
Mean									
1979–2017	2,421	12,954	23,843	1,848	3,961	3,739	702	867	21,036
2008–2017	467	6,721	16,466	1,109	2,698	2,179	238	667	9,014
2013–2017	708	8,686	18,688	1,206	3,407	2,501	310	1,002	10,671
2018	296	2,977	8,549	0 <sup>i</sup>	1,767	1,483	154	578	7,255
Escapement goal	2,100–6,000 <sup>f</sup>	<sup>g</sup>	13,000–28,000 <sup>h</sup>	1,000–2,600 <sup>f</sup>	2,500–7,100 <sup>f</sup>	2,200–5,000 <sup>f</sup>			

Note: NA means not applicable; ND means no attempts were made to collect data.

<sup>a</sup> No weir on the Deshka River prior to 1995. Weir count, not an actual escapement count.

<sup>b</sup> May include Donkey Creek, Red Creek, Red Salmon Creek, Canyon Creek, and other miscellaneous creeks.

<sup>c</sup> No count due to poor water visibility.

<sup>d</sup> Low count due to timing, poor visibility, or weather conditions.

<sup>e</sup> High water delayed the deployment of the weir until 16 June 1998. Therefore, this weir count is low and may represent only half of the return.

<sup>f</sup> Sustainable Escapement Goal (SEG) established in 2001 (Bue and Hasbrouck *Unpublished*).

<sup>g</sup> Aerial escapement goals for Deshka River Chinook salmon: 11,200 fish (1994–1998), 8,750 (1999–2001), and discontinued thereafter (2002–2009).

<sup>h</sup> Weir based Biological Escapement Goal (BEG) established in 2001 (Bue and Hasbrouck *Unpublished*).

<sup>i</sup> Invalid count.

Table 37.—West Cook Inlet drainage Chinook salmon harvest by fishery, 1977–2017.

Year	Chuitna River	Beluga River	Theodore River	Lewis River	Susitna River–N. Foreland	South of N. Foreland	Other sites	Total
1977	227		237	9				473
1978	408		58	12				478
1979	78		20	0				98
1980	17		17	0				34
1981	115		77					192
1982	105		42					147
1983	1,185		0					1,185
1984	723		1,110					1,833
1985	734		1,195	100				2,029
1986	960		1,418					2,378
1987	146		1,146	185				1,477
1988	312		1,137	246				1,695
1989	581	237	1,317	190				2,325
1990	1,064		748	285				2,097
1991	377		369	16				762
1992	516	175	522					1,213
1993	893		527	27		100	408	1,955
1994	530		581			6	466	1,583
1995	201		360	0		19	113	693
1996	844		183	0	331	0	0	1,358
1997	728		0	0	121	22	23	894
1998	551		0	0	73	63	6	693
1999	561		0	0	301	189	22	1,073
2000	513		0		182	468	0	1,163
2001	457		21		54	64	126	722
2002	629		0	0	502	0	96	1,227
2003	592	51	13	0	194	144	130	1,124
2004	333	276	0	0	102	0	84	795
2005	294	105	0	0	24	92	77	592
2006	445	66	0	0	160	32	335	1,038
2007	984	143	0	0	33	47	173	1,380
2008	46	15	0	0	217	159	0	437
2009	109	51	0	0	112	204	353	829
2010	0	58	0	0	121	480	0	659
2011	0	0	0	0	0	54	22	76
2012	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	11	119	130
2015	0	0	0	0	122	0	0	122
2016	0	0	0	0	0	35	0	35
Mean								
2011–2016	0	0	0	0	24	9	24	57
2017	0	0	0	0	0	0	41	41

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: Blank cells indicate no data.

Table 38.—West Cook Inlet Management Unit Chinook salmon escapement index counts, 1979–2018.

Year	Chuitna River	Theodore River	Lewis River	Coal Creek	Other streams <sup>a</sup>	Total WCI
1979	1,246	512	546		236	2,540
1980 <sup>b</sup>						
1981	1,362	535	560		1,144	3,601
1982	3,438	1,368	606		1,972	7,384
1983	4,043	1,519	<sup>b</sup>		<sup>b</sup>	5,562
1984	2,845	1,251	947		<sup>b</sup>	5,043
1985	1,600	1,458	861		700	4,619
1986	3,946	1,281	722		165	6,114
1987	<sup>b</sup>	1,548	875		<sup>b</sup>	2,423
1988	3,024	1,906	616		<sup>b</sup>	5,546
1989	990	1,026	452		<sup>b</sup>	2,468
1990	480	642	207		<sup>b</sup>	1,329
1991	537	508	303		<sup>b</sup>	1,348
1992	1,337	1,053	445		<sup>b</sup>	2,835
1993	2,085	1,110	531		156	3,882
1994	1,012	577	164		368	2,121
1995	1,162	694	146	221		2,223
1996	1,343	368	257	424		2,392
1997	2,232	1,607	777	471		5,087
1998	1,869	1,807	626	503		4,805
1999	3,721	2,221	675	1195		7,812
2000	1,456	1,271	480	757		3,964
2001	1,501	1,237	502	1,154		4,394
2002	1,394	934	439	882		3,649
2003	2,339	1,059	878	698		4,974
2004	2,938	491	1000	609		5,038
2005	1,307	478	441	504		2,730
2006	1,911	958	341	996		4,206
2007	1,180	486	0 <sup>c</sup>	773		2,439
2008	586	345	120			1,051
2009	1,040	352	111	119 <sup>d</sup>		1,622
2010	735	202	56			993
2011	719	327	92	373		1,511
2012	502	179	107	184		972
2013	1,690	476	61	138		2,365
2014	1,398	312	61	411		2,182
2015	1,965	426	5 <sup>c</sup>	455		2,851
2016	1,372	68	0 <sup>c</sup>	<sup>b</sup>	<sup>b</sup>	1,440
2017	235	21	0 <sup>c</sup>	82	227	565
Mean						
1979–2017	1,690	858	406	547	621	3,392
2008–2017	1,024	271	61	252		1,555
2013–2017	1,332	261	25	272		1,881
2018	939	18	0 <sup>c</sup>	<sup>b</sup>	<sup>b</sup>	957
SEG <sup>e</sup>	1,200–2,900	500–1,700	250–800			

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Table 38.—Page 2 of 2.

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*Source:* ADF&G staff surveys.

*Note:* Blank cells indicate no data.

- <sup>a</sup> May include Olsen, Nikoli, Coal, Straight, Bishop, Drill, and Scarp creeks.
- <sup>b</sup> No count conducted, turbid water.
- <sup>c</sup> River diverged into open muskeg one-half mile below bridge. No water in mainstem.
- <sup>d</sup> Mainstem too glacial to count. Only counted above forks.
- <sup>e</sup> SEG means sustainable escapement goal.

Table 39.—Harvest of coho salmon from the Northern Cook Inlet Management Area (NCIMA) by management unit, 1977–2017.

Year	Northern Cook Inlet Management Area					South-central Region total	NCIMA % of region	Alaska total	NCIMA % of state
	Knik Arm	Eastside Susitna	Westside Susitna	West Cook Inlet	Total NCIMA				
1977	4,366	5,709	6,599	532	17,206	67,866	25	105,004	16
1978	7,895	8,573	10,173	378	27,019	81,990	33	131,945	20
1979	7,139	7,564	9,036	337	24,076	93,234	26	119,329	20
1980	16,030	10,368	12,141	628	39,167	127,958	31	164,302	24
1981	10,484	6,593	5,940	604	23,621	95,376	25	125,666	19
1982	13,676	10,167	10,658	745	35,246	136,153	26	195,644	18
1983	6,139	5,176	3,610	2,552	17,477	87,935	20	149,270	12
1984	23,429	13,916	9,511	2,681	49,537	166,688	30	238,536	21
1985	14,339	7,042	11,270	6,320	38,971	137,671	28	200,773	19
1986	12,361	16,190	13,117	4,222	45,890	188,872	24	255,887	18
1987	25,787	11,028	8,746	8,548	54,109	176,710	31	235,435	23
1988	40,037	19,518	16,283	7,403	83,241	225,812	37	281,450	30
1989	23,846	17,078	18,226	7,683	66,833	237,155	28	338,195	20
1990	18,762	11,743	13,883	6,016	50,404	214,114	24	325,936	15
1991	22,186	19,479	20,507	8,253	70,425	254,961	28	389,569	18
1992	25,814	33,790	16,218	7,037	82,859	237,204	35	345,513	24
1993	35,763	26,063	15,454	10,326	87,606	283,868	31	412,487	21
1994	28,539	20,870	15,361	8,247	73,017	299,849	24	502,948	15
1995	20,650	19,165	17,148	8,182	65,145	263,749	25	368,631	18
1996	24,874	24,174	17,375	11,430	77,853	328,178	24	503,413	15
1997	11,773	10,297	7,123	6,492	35,685	283,311	13	462,931	8
1998	23,750	23,086	13,235	8,160	68,231	375,742	18	600,862	11
1999	14,429	23,292	17,995	9,339	65,055	309,564	21	632,829	10
2000	32,530	37,748	23,262	11,712	105,252	419,835	25	624,327	17
2001	30,106	26,617	19,221	13,949	89,893	480,048	19	811,799	11
2002	44,448	27,183	14,144	13,380	99,155	488,911	20	776,033	13
2003	24,583	18,585	16,072	14,239	73,479	450,231	16	783,328	9
2004	34,298	20,484	17,785	16,179	88,746	516,183	17	861,490	10
2005	27,000	17,471	18,266	12,572	75,309	514,473	15	937,965	8
2006	39,953	22,719	20,474	11,940	95,086	425,981	22	652,953	15
2007	27,733	13,464	14,065	12,580	67,842	444,032	15	716,815	9
2008	35,996	24,211	15,126	14,673	90,006	426,916	21	676,376	13
2009	37,271	15,335	14,464	9,801	76,871	397,945	19	665,000	12
2010	26,369	14,291	16,036	9,030	65,726	369,235	18	565,943	12
2011	8,484	9,040	12,483	6,292	36,299	331,506	11	575,303	6
2012	5,014	7,629	9,434	7,813	29,890	211,501	14	429,229	7
2013	12,335	12,989	13,042	7,698	46,064	345,105	13	698,469	7
2014	16,180	12,462	12,972	7,320	48,934	327,894	15	630,068	8
2015	17,800	15,043	14,191	12,849	59,883	422,429	14	743,188	8
2016	7,989	5,939	4,022	6,029	23,979	179,791	13	424,561	6

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Table 39.—Page 2 of 2.

Year	Northern Cook Inlet Management Area					South-central Region total	NCIMA % of region	Alaska total	NCIMA % of state
	Knik Arm	Eastside Susitna	Westside Susitna	West Cook Inlet	Total NCIMA				
Mean									
1977–2016	21,504	16,302	13,622	7,854	59,282	285,649	22	466,485	15
2012–2016	11,864	10,812	10,732	8,342	41,750	297,344	14	585,103	7
% of NCIMA mean									
2012–2016	28	26	26	20					
2017	6,232	12,838	10,759	4,828	34,657	323,658	11	665,800	5

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Table 40.—Coho salmon harvest (H) and angler-days of fishing effort (E) from Knik Arm sport fisheries, 1977–2017.

Year	Other Knik Arm																
	Little Susitna River			Jim Creek <sup>a</sup>		Wasilla Creek		Cottonwood Creek		Fish Creek		Eklutna Tailrace		Other		Total	
	H	Hatchery <sup>b</sup>	E <sup>c</sup>	H	E <sup>c</sup>	H	E <sup>c</sup>	H	E <sup>c</sup>	H	E <sup>c</sup>	H	E <sup>c</sup>	H	E <sup>c</sup>	H	E <sup>c</sup>
1977	3,415		11,063			472	2,805							479	68,081	4,366	81,949
1978	4,865		12,127			2,112	3,446							918	59,967	7,895	75,540
1979	3,382		21,301			1,211	4,024	1,198	5,345					1,348	47,741	7,139	78,411
1980	6,302		22,420			3,555	5,726	3,375	9,268					2,798	65,116	16,030	102,530
1981	5,940		26,162	1,801	4,904	814	4,019	1,373	8,663					556	61,304	10,484	105,052
1982	7,116		24,020	2,306	6,653	1,624	6,261	1,886	5,186					744	49,593	13,676	91,713
1983	2,835		35,477	774	9,183	345	3,239	518	5,944					1,667	84,546	6,139	138,389
1984	14,253		48,517	3,429	9,369	1,920	3,547	1,895	7,144			561	3,413	1,371	58,737	23,429	130,727
1985	7,764		37,498	2,523	8,970	1,900	3,115	1,005	4,560	284	903	557	2,995	306	64,585	14,339	122,626
1986	6,039	109	45,776	2,948	13,015	944	3,387	690	5,653	364	2,641	502	8,549	874	52,585	12,361	131,606
1987	13,003	3,407	35,659	3,676	6,990	1,195	2,173	1,159	2,934	833	2,898	2,318	11,663	3,603	77,850	25,787	140,167
1988	19,009	9,638	49,731	11,078	23,229	1,273	2,228	746	4,056	1,637	3,110	3,329	13,188	2,965	87,487	40,037	183,029
1989	14,129	10,597	54,708	4,220	11,141	975	2,406	876	3,069	784	3,314	1,666	10,342	1,196	61,932	23,846	146,912
1990	7,497	2,242	40,159	6,184	17,878	1,012	2,679	286	3,056	398	3,936	1,012	7,618	2,373	67,558	18,762	142,884
1991	16,450	7,699	50,838	2,920	13,736	844	2,893	176	1,623	486	3,693	631	5,892	679	67,930	22,186	146,605
1992	20,033	3,406	49,304	3,409	8,856	413	1,110	348	1,974	526	3,638	664	4,279	421	72,664	25,814	141,825
1993	27,610	7,703	42,249	2,878	6,824	1,133	1,774	736	3,077	741	2,341	1,337	4,523	1,328	57,426	35,763	118,214
1994	17,665	6,165	45,149	3,946	9,658	1,390	2,226	1,100	3,230	492	2,358	3,553	8,974	393	71,777	28,539	143,372
1995	14,451	2,991	41,119	3,549	10,893	445	1,373	340	2,598	435	2,256	990	11,453	440	56,462	20,650	126,154
1996	16,753	3,418	24,575	3,911	7,561	872	1,386	762	1,783	607	934	1,217	6,448	752	48,303	24,874	90,990
1997	7,756	0	27,883	1,786	5,349	708	1,188	372	2,070	148	1,104	728	3,835	275	54,301	11,773	95,730
1998	14,469	0	22,108	4,197	5,272	970	1,171	1,098	3,454	1,334	2,256	1,422	5,100	260	38,857	23,750	78,218
1999	8,864	0	30,437	2,612	6,860	313	990	537	3,506	233	2,182	1,453	6,150	417	62,517	14,429	112,642
2000	20,357	0	39,556	5,653	10,975	0	328	282	1,265	470	1,408	5,053	7,938	715	60,131	32,530	121,601
2001	17,071	0	33,521	8,374	13,028	0	419	647	2,627	361	1,670	3,399	10,166	254	49,596	30,106	111,027
2002	19,278	0	40,346	14,707	17,989	664	1,037	561	1,534	1,233	2,776	7,073	11,767	932	50,745	44,448	126,194
2003	13,672		31,993	6,415	13,474	261	757	665	2,238	112	758	3,128	8,423	330	46,335	24,583	103,978
2004	15,307	0	33,819	11,766	19,342	488	1,079	532	3,282	774	2,029	5,084	9,588	347	44,389	34,298	113,528
2005	10,203	0	27,490	10,114	19,605	347	684	668	1,484	535	1,461	4,899	19,339	234	45,700	27,000	115,763

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Table 40.—Page 2 of 2.

Year	Other Knik Arm																
	Little Susitna River			Jim Creek <sup>a</sup>		Wasilla Creek		Cottonwood Creek		Fish Creek		Eklutna Tailrace		Other		Total	
	H	Hatch. <sup>b</sup>	E <sup>c</sup>	H	E <sup>c</sup>	H	E <sup>c</sup>	H	E <sup>c</sup>	H	E <sup>c</sup>	H	E <sup>c</sup>	H	E <sup>c</sup>	H	E <sup>c</sup>
2006	12,399	0	28,547	19,259	25,271	857	869	789	3,867	281	948	6,104	20,465	264	39,828	39,953	119,795
2007	11,089	0	23,233	11,848	21,342	324	1,194	856	3,448	120	907	3,298	22,619	198	47,938	27,733	120,681
2008	13,498	0	31,989	17,545	27,874	1,086	1,394	308	2,718	993	1,343	2,253	20,586	313	50,668	35,996	136,572
2009	8,346		28,151	11,573	16,486	1,002	1,619	1,503	2,512	1,178	2,050	6,767	22,625	6,902	49,065	37,271	122,508
2010	10,662		24,846	8,442	16,140	2,886	2,354	301	2,064	966 <sup>d</sup>	2,161	3,233	14,708	616	44,008	26,369	106,281
2011	2,452		12,779	3,132	9,810	372	1,300	619	1,736	414	970	1,350	5,972	145	34,117	8,484	66,684
2012	1,681		10,115	1,858	7,474	191	506	616	884	274	1,220	394	5,475	0	32,999	5,014	58,673
2013	5,229		12,012	3,258	8,474	1,286	1,569	297	901	356	1,000	1,521	8,370	388	43,786	12,335	76,112
2014	6,922		13,636	3,045	9,376	853	1,258	275	1,522	622	2,068	4,103	13,443	360	56,604	16,180	97,907
2015	8,880		17,845	2,910	5,746	1,471	1,467	53	2,645	2,041	2,587	2,224	13,968	529	41,084	18,108	85,342
2016	4,361		16,168	1,343	5,406	293	548	224	3,471	496	1,598	1,054	16,007	202	19,844	7,973	63,042
Mean																	
1977–2016	11,024		30,608	5,816	12,060	971	2,039	781	3,326	631	2,016	2,511	10,481	981	54,854	22,151	111,774
2012–2016	5,402		13,955	2,483	7,295	819	1,070	293	1,885	758	1,695	1,859	11,453	369	38,863	11,983	76,215
2017	3,068		11,376	750	3,299	395	954	580	3,043	358	1,250	913	12,300	168	41,241	6,232	73,463

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019).

Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> Includes other Knik River tributaries

<sup>b</sup> Bartlett and Conrad (1988), Bartlett and Vincent-Lang (1989), Bartlett and Sonnichsen (1990), Bartlett and Bingham (1991), Bartlett (1992, 1994, 1996a, 1996b).

<sup>c</sup> Participation directed at coho salmon represents only a portion of the annual effort.

<sup>d</sup> Includes Fish Creek saltwater areas.

Table 41.—Westside Knik Arm drainage coho salmon escapement counts for Fish Creek, Little Susitna River, Cottonwood Creek, and Wasilla Creek drainage, 1981–2018.

Year	Fish Creek weir <sup>a</sup>	Little Susitna River		Cottonwood Creek		Wasilla Creek drainage					Total
		Stocked fish	Weir <sup>c</sup>	Weir	Index <sup>b</sup>	Weir		Indices <sup>b</sup>			
						Wasilla Creek	Spring Creek	Wasilla Creek mainstem	Upper Spring Creek	Spring Creek flats	
1981	2,382			2,436 <sup>d</sup>	423			238	<sup>e</sup>	64	302
1982	5,201			2,064 <sup>d</sup>	737			171	<sup>e</sup>	105	276
1983	2,342				506			4	<sup>e</sup>	28	32
1984	4,510				935			876		90	966
1985	5,089				334			16	150	81	247
1986	2,166		6,999 <sup>f</sup>		121			<sup>e</sup>	141	147	288
1987	3,871				360			251	110	42	403
1988	2,162	4,428	21,437		293			<sup>e</sup>	82	30	112
1989	3,479	6,862	15,855		147			<sup>e</sup>	67	39	106
1990	2,719	3,370	15,511		167			34	38	12	84
1991	1,297	8,322	39,241		158			118	16	5	139
1992	1,705	2,690	21,182		6			3	11	0	14
1993	2,328	9,189	34,822		265			<sup>e</sup>	67	69	136
1994	350	5,442	28,948		232			282	76	60	418
1995	390	1,135	12,266		242			46	20	38	104
1996	682		15,803		168			84	30	29	143
1997	2,578		9,894 <sup>f</sup>	936	386			156	38	35	229
1998	5,463		15,159	2,114	537	3,614	163	120 <sup>g</sup>	31 <sup>g</sup>	25	176
1999	1,766		3,017	458 <sup>h</sup>	131 <sup>i</sup>	1,579 <sup>i</sup>	8	211	40	16	267
2000	5,218 <sup>h</sup>		15,436	1,482 <sup>h</sup>	876 <sup>i</sup>	6,154	0	380 <sup>g</sup>	224	50	654
2001	9,247 <sup>h</sup>		30,587	2,921 <sup>h</sup>	983 <sup>i</sup>	6,508	276	453	37	15	505
2002	14,651 <sup>h</sup>		47,938	4,081 <sup>h</sup>	1,191 <sup>i</sup>	12,495	162	933	188	75	1,196
2003	1,231 <sup>h</sup>		10,877	706 <sup>h</sup>	229 <sup>i</sup>	2,962	<sup>j</sup>	227	17	50	294
2004	1,415 <sup>h</sup>		40,199	1,772 <sup>h</sup>	430 <sup>i</sup>	<sup>j</sup>		934	114	100	1,148
2005	3,011 <sup>h</sup>		16,839 <sup>f</sup>	<sup>j</sup>	619 <sup>i</sup>			<sup>e</sup>	<sup>e</sup>	130	130
2006	4,967 <sup>h</sup>		8,786 <sup>f</sup>		912 <sup>i</sup>			294 <sup>k</sup>	171	272	737
2007	6,868 <sup>h</sup>		17,573		1,024 <sup>i</sup>			380 <sup>k</sup>	50	0	430
2008	4,868 <sup>h</sup>		18,485		1,821 <sup>i</sup>			1,461	63	12	1,536

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Table 41.–Page 2 of 2.

Year	Fish Creek weir <sup>a</sup>	Little Susitna River		Cottonwood Creek		Wasilla Creek drainage					
		Stocked fish	Weir <sup>c</sup>	Weir	Index <sup>b</sup>	Weir		Indices <sup>b</sup>			
						Wasilla Creek	Spring Creek	Wasilla Creek mainstem	Upper Spring Creek	Spring Creek flats	Total
2009	8,214 <sup>h</sup>		9,523		942 <sup>i</sup>			936	28	14	978
2010	6,977 <sup>h</sup>		9,214		756 <sup>i</sup>			927	290	6	1,223
2011	1,428 <sup>h</sup>		4,826		698			518	55	3	576
2012	1,237		6,779		467			<sup>e</sup>	<sup>e</sup>	<sup>e</sup>	<sup>e</sup>
2013	7,593 <sup>f</sup>		13,583 <sup>f</sup>		1,618			422	12	26	460 <sup>e</sup>
2014	10,283		24,211		1,698		0	1,030	14	23	1,067
2015	7,912		12,756 <sup>f,l</sup>		1,068			292	63	20	375
2016	2,484		10,049		373			216	60	30	306
2017	8,966		17,781		1,388			776	44	28	848
Mean											
1981–2017	4,245	5,180	19,998	1,897	628			413	76	49	470
2008–2017	5,557	–	12,609	–	1,083			731	70	18	819
2013–2017	7,244	–	17,347	–	1,229			547	39	25	611
2018	5,022		7,583 <sup>f</sup>		616			263	38	38	339
SEG	1,200–4,400	10,100–17,700									

Note: The symbol “–” indicates value can’t be calculated due to limitations of the data. Blank cells indicate either no stocking (Little Susitna River) or a weir was not operated.

<sup>a</sup> Weir count plus stream survey during 1982–1991; weir count only during 1992–1993; weir was removed on 15 August before the majority of the coho run during 1994–1996, 2004–2008, 2011 and 2016; weir was out on 1 September in 1997.

<sup>b</sup> Foot surveys unless otherwise noted.

<sup>c</sup> Weir located at RM 34 in 1986 and 1988–1995; weir located at RM 71 in 1996–2010.

<sup>d</sup> Combination weir and foot survey. Weir was removed prior to completion of coho run.

<sup>e</sup> No survey conducted.

<sup>f</sup> Incomplete or partial count due to weir submersion.

<sup>g</sup> Count conducted late due to high water.

<sup>h</sup> Coho salmon counted below weir after it was pulled: Fish Creek 2000–2010: 761 (2000), 800 (2001), 536 (2002), 911 (2003), 1,840 (2004), 825 (2005), 756 (2006), 2,750 (2007), 4,735 (2008), 452 (2009), 57 (2010), 872 (2011); Cottonwood Creek 1999–2004: 20 (1999), 406 (2000), 604 (2001), 189 (2002), 85 (2003), 266 (2004).

<sup>i</sup> Beginning in 1999, the highest count of 3 counts occurred within a 2-week period.

<sup>j</sup> Weir discontinued.

<sup>k</sup> Poor counting conditions.

<sup>l</sup> Weir pulled early on August 26, 2015.

Table 42.—Eastside Knik Arm drainage coho salmon escapement counts for Jim Creek drainage, 1981–2018.

Year	Jim Creek drainage			
	Weir	Indices <sup>a</sup>		Total
		McRoberts Creek	Upper Jim Creek	
1981				<sup>b</sup>
1982				<sup>b</sup>
1983				<sup>b</sup>
1984				<sup>b</sup>
1985		662		662
1986		439		439
1987		667		667
1988		1,911		1,911
1989		597		597
1990		599	589	1,188
1991		484	418	902
1992		11	59	70
1993	5,532	503	535	1,038
1994	6,451	506	2,119	2,625
1995		702	1,288	1,990
1996		72	439	511
1997		701	563	1,264
1998		922	560	1,482
1999		12	320	332
2000		657	2,561	3,218
2001		1,019	575	1,594
2002		2,473	1,630	4,103
2003		1,421	393	1,814
2004		4,652	1,045	5,697
2005		1,464	1,883	3,347
2006		2,389	1,750	4,139
2007		725	1,150	1,875
2008		1,890	1,029	2,919
2009		1,331	1,193	2,524
2010		242	420	662
2011		261	229	490
2012		213 <sup>c</sup>	495	708
2013		663	1,029	1,692
2014		122	618	740
2015	3,572	571	374	945
2016		106	307	413
2017		607	874	1,481
Mean				
1981–2017	–	897	873	1,638
2008–2017	–	601	657	1,257
2013–2017	–	414	640	1,054
2018		758	1,215	1,973
SEG		450–1,400		

Source: ADF&G staff surveys and weir data.

Note: The symbol “–” indicates value can’t be calculated due to limitations of the data. Blank cells indicate no data.

<sup>a</sup> Foot surveys unless otherwise noted.

<sup>b</sup> No survey conducted.

<sup>c</sup> Count conducted late due to high water.



Table 43.—Eastside Susitna River drainage coho salmon harvest by fishery, 1977–2017.

Year	Willow Creek	Little Willow Creek	Kashwitna River	Caswell Creek	Sheep Creek	Goose Creek	Montana Creek	Birch Creek	Sunshine Creek	Talkeetna River <sup>a</sup>	Other <sup>b</sup>	Total
1977	679	225	ND	ND	438	ND	1,415	ND	ND	1,070	1,882	5,709
1978	905	151	ND	ND	478	ND	2,451	ND	ND	2,200	2,388	8,573
1979	462	262	ND	624	462	ND	1,735	ND	774	1,248	1,997	7,564
1980	1,207	494	ND	1,124	430	ND	2,684	ND	1,534	661	2,234	10,368
1981	747	29	ND	901	326	ND	2,261	ND	968	422	939	6,593
1982	1,069	398	ND	776	367	ND	3,060	ND	1,719	996	1,782	10,167
1983	576	52	52	408	596	ND	1,402	ND	722	836	532	5,176
1984	1,846	1,147	162	1,247	661	449	4,502	ND	1,733	1,509	660	13,916
1985	1,026	528	ND	608	478	ND	1,972	ND	1,205	747	478	7,042
1986	944	363	871	472	1,343	363	1,488	980	4,029	3,376	1,961	16,190
1987	2,898	561	36	453	1,068	145	1,394	163	1,612	2,608	90	11,028
1988	4,875	1,237	327	1,455	3,165	291	2,219	691	2,146	2,929	183	19,518
1989	4,218	1,388	336	834	2,231	190	2,295	281	2,159	2,775	371	17,078
1990	2,711	639	197	2,596	991	180	778	ND	704	2,539	408	11,743
1991	4,154	1,308	167	3,819	1,544	657	1,612	322	1,761	3,435	700	19,479
1992	8,591	1,830	713	5,393	4,049	502	3,595	858	2,259	5,531	469	33,790
1993	5,743	1,213	554	2,385	2,413	428	3,496	535	2,922	5,830	544	26,063
1994	4,504	1,452	328	1,569	1,586	478	2,619	281	1,906	5,476	671	20,870
1995	3,498	992	472	1,687	1,092	152	2,385	198	1,385	6,672	632	19,165
1996	5,176	1,892	360	668	1,896	430	3,118	258	2,612	7,325	439	24,174
1997	2,401	661	202	294	1,198	166	1,692	177	443	2,815	248	10,297
1998	5,908	1,185	670	564	3,417	382	2,720	920	1,589	5,340	382	23,086
1999	5,019	871	260	1,198	3,045	440	3,382	622	1,709	5,814	932	23,292
2000	8,679	2,885	994	1,702	3,348	1,181	5,454	1,160	3,274	7,703	1,368	37,748
2001	6,835	1,936	728	1,408	2,588	683	5,023	146	1,072	5,195	1,003	26,617

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Year	Willow Creek	Little Willow Creek	Kashwitna River	Caswell Creek	Sheep Creek	Goose Creek	Montana Creek	Birch Creek	Sunshine Creek	Talkeetna River <sup>a</sup>	Other <sup>b</sup>	Total
2002	6,040	1,513	494	797	2,995	204	4,644	288	3,238	5,640	1,330	27,183
2003	2,918	635	1,090	938	1,908	220	3,361	421	2,508	3,984	602	18,585
2004	2,981	1,290	251	189	2,636	248	4,866	223	2,070	4,454	1,276	20,484
2005	4,255	1,103	369	340	2,337	267	2,592	288	2,493	3,359	68	17,471
2006	5,031	1,511	1,202	780	3,602	906	2,622	281	3,460	3,224	100	22,719
2007	3,625	853	253	185	2,707	75	2,017	149	1,318	2,166	116	13,464
2008	3,760	1,340	2,880	649	2,125	594	5,628	58	2,928	4,128	121	24,211
2009	3,232	1,027	525	607	1,594	635	3,087	320	816	3,114	1,713	16,670
2010	1,986	1,506	660	670	1,641	132	2,498	345	1,123	2,729	1,001	14,291
2011	2,055	189	755	129	762	64	780	196	1,046	1,895	1,169	9,040
2012	918	295	285	160	395	608	1,085	129	957	2,282	515	7,629
2013	1,760	210	541	284	1,699	52	2,428	652	685	2,940	1,738	12,989
2014	1,408	807	564	99	995	1,593	1,602	172	1,775	2,028	1,419	12,462
2015	3,127	437	376	203	2,215	519	1,530	0	873	3,377	2,386	15,043
2016	3,127	437	376	203	2,215	519	1,530	0	873	3,377	2,386	15,043
Mean												
2012–2016	1,575	429	397	215	1,268	587	1,395	197	964	2,303	1,482	10,812
2017	2,787	582	99	241	1,217	23	1,767	0	1,585	3,298	1,239	12,838

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019).

Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> Talkeetna River and tributaries including Clear Creek.

<sup>b</sup> Includes lakes and streams.

Table 44.—Westside Susitna River drainage coho salmon harvest by fishery, 1977–2017.

Year	Alexander Creek	Deshka River	Rabideux Creek	Peters Creek	Yentna River	Lake Creek	Fish Creek <sup>a</sup>	Talachulitna River	Other <sup>b</sup>	Total
1977	1,562	559	ND	ND	ND	1,203	ND	346	2,929	6,599
1978	2,401	1,789	ND	ND	ND	2,212	ND	88	3,683	10,173
1979	1,560	973	ND	ND	ND	2,671	ND	125	3,707	9,036
1980	999	2,290	ND	ND	ND	2,351	ND	491	6,010	12,141
1981	891	632	ND	ND	ND	1,035	ND	240	3,142	5,940
1982	1,907	2,463	ND	ND	ND	1,603	ND	524	4,161	10,658
1983	408	1,036	ND	ND	ND	1,392	ND	84	690	3,610
1984	1,509	1,646	ND	12	ND	2,432	ND	486	3,426	9,511
1985	1,455	2,637	ND	ND	ND	4,105	ND	224	2,849	11,270
1986	1,352	4,256	ND	ND	ND	1,575	324	402	5,208	13,177
1987	1,539	2,789	ND	ND	ND	1,358	362	235	2,463	8,746
1988	1,965	7,458	ND	18	ND	2,110	400	418	3,914	16,283
1989	2,207	8,947	409	47	103	1,907	549	688	3,369	18,226
1990	1,973	4,959	540	33	353	2,986	793	276	1,970	13,883
1991	2,296	8,111	32	221	718	4,221	1,081	828	2,999	20,507
1992	834	7,110	543	300	275	2,632	575	405	3,544	16,218
1993	1,719	6,530	ND	67	227	3,101	920	152	2,738	15,454
1994	2,188	5,511	ND	72	556	2,723	714	427	3,170	15,361
1995	2,692	2,275	ND	183	569	4,736	1,058	1,031	4,604	17,148
1996	803	4,615	ND	57	1,198	4,445	618	805	4,834	17,375
1997	1,307	1,169	ND	89	591	1,445	332	793	1,397	7,123
1998	1,158	3,630	ND	ND	299	4,353	785	905	2,105	13,235
1999	1,418	4,034	ND	65	1,093	6,931	2,261	1,453	740	17,995
2000	2,695	8,687	ND	157	1,050	6,297	1,320	1,347	1,709	23,262
2001	1,972	6,556	ND	0	620	5,610	1,958	1,142	1,363	19,221

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Table 44.–Page 2 of 2.

Year	Alexander Creek	Deshka River	Rabideux Creek	Peters Creek	Yentna River	Lake Creek	Fish Creek <sup>a</sup>	Talachulitna River	Other <sup>b</sup>	Total
2002	1,191	3,616	ND	177	705	4,613	1,034	1,447	1,361	14,144
2003	1,071	4,946	ND	155	1,162	5,263	959	1,543	973	16,072
2004	1,827	4,440	586	149	1,283	6,106	1,880	959	555	17,785
2005	757	3,616	168	96	678	8,684	2,292	583	1,392	18,266
2006	119	6,042	837	105	3,040	6,330	1,433	1,127	1,441	20,474
2007	328	2,550	134	454	3,512	3,685	842	1,804	756	14,065
2008	10	3,426	714	227	3,563	4,147	567	1,511	961	15,126
2009	501	4,060	23	472	2,607	4,417	417	675	1,292	14,464
2010	214	5,690	112	200	3,679	4,572	322	681	566	16,036
2011	245	2,282	118	894	3,685	3,340	139	533	1,247	12,483
2012	237	1,358	149	158	2,406	2,775	696	444	1,211	9,434
2013	448	2,658	0	0	2,111	4,961	81	1,040	1,743	13,042
2014	415	2,598	60	757	2,064	4,659	322	621	1,476	12,972
2015	406	2,221	636	418	3,077	4,390	473	1,859	711	14,191
2016	126	1,528	0	107	696	1,126	0	217	222	4,022
Mean										
2012–2016	326	2,073	169	288	2,071	3,582	314	836	1,073	10,732
2017	265	2,825	545	46	1,992	3,277	174	1,005	630	10,759

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019).

Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> Fish Lake drainage (Yentna River drainage).

<sup>b</sup> May include harvest from West Cook Inlet Management Unit lakes and streams.

Table 45.—Eastside and Westside Susitna river drainages coho salmon escapement counts, 1984–2018.

Year	Westside Susitna Management Unit			Eastside Susitna Management Unit <sup>a</sup>				Susitna total
	Deshka River <sup>b</sup>	Rabideux Creek index	Total	Birch Creek index	Question Creek index	Answer Creek index	Total	
1984		480	480	236	60	57	353	833
1985		82	82	30	89	9	128	210
1986		<sup>c</sup>	0	25	<sup>c</sup>	<sup>c</sup>	25	25
1987		50 <sup>d</sup>	50	46	149	10	205	255
1988		230	230	63	337	160	560	790
1989		20	20	180	31	66	277	297
1990		20	20	36	41	6	83	103
1991		185	185	300	492	51	843	1,028
1992		<sup>c</sup>	0	167	227	181	575	575
1993		<sup>c</sup>	0	178	370	34	582	582
1994		105	105	224	339	0 <sup>e</sup>	563	668
1995	12,824	39	12,863	127	155	35	317	13,180
1996		<sup>c</sup>	0	458	238	43	739	739
1997	8,063	114	8,177	217	186	57	460	8,637
1998	6,773 <sup>b</sup>	56	6,829	356	519	45	920	7,749
1999	4,563 <sup>b</sup>	169	4,732	153	128	470	751	5,483
2000	26,387	354	26,741	809	1,040	899	2,748	29,489
2001	29,927	656	30,583	1,470	450	371	2,291	32,874
2002	24,612 <sup>b</sup>	<sup>c</sup>	24,612	1,158	1,010	249	2,417	27,029
2003	17,305	344	17,649		407	131	538	18,187
2004	62,940	<sup>c</sup>	62,940		822	111	933	63,873
2005	47,887	<sup>c</sup>	47,887	1,014	537	35	1,586	49,473
2006	59,419 <sup>b</sup>	3,063	62,482	883	299	270	1,452	63,934
2007	10,575	<sup>c</sup>	10,575	167	241	26	434	11,009
2008	12,724	10,043	22,767	798	273	382	1,453	24,220

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Westside Susitna Management Unit				Eastside Susitna Management Unit <sup>a</sup>				
Year	Deshka River <sup>c</sup>	Rabideux Creek index	Total	Birch Creek index	Question Creek index	Answer Creek index	Total	Susitna total
2009	27,348	345 <sup>f</sup>	27,693	219 <sup>f</sup>	9 <sup>f</sup>	166 <sup>i</sup>	394	28,087
2010	10,393	161	10,554	117	41	2	160	10,714
2011	7,508 <sup>b</sup>	58	7,566	76	94	116	286	7,852
2012	6,825	<sup>c</sup>	6,825	276	75 <sup>d</sup>	<sup>c</sup>	351	7,176
2013	22,341	127	22,468	159	265	19	443	22,911
2014	11,578	139	11,717	398	251	40	689	12,406
2015	10,775	<sup>c</sup>	10,842	191	166	14	371	11,213
2016	6,820 <sup>b</sup>	<sup>c</sup>	6,820	83 <sup>d</sup>	121 <sup>d</sup>	0 <sup>d</sup>	204	7,024
2017	36,869	119	36,988	182	260	74	516	37,504
Mean								
1981–2017	21,310	737	14,161	337	295	129	725	14,886
2006–2017	14,636	1,570	16,424	250	156	90	487	16,911
2011–2017	19,741	128	17,767	203	213	29	445	18,212
2018	12,962	110	13,072	143	513	15	671	13,743

Source: ADF&G weir and foot surveys.

Note: Blank cells indicate no data.

<sup>a</sup> Survey conducted by walking portions of the creek.

<sup>b</sup> Weir count. Deshka River weir locations: RM 17 (1995), and RM 7 (1997–2000). In 1998, 1999, 2002, 2006, 2011, and 2016 the weir was underwater for an extended time during the coho salmon season, resulting in incomplete counts. Means are given for complete counts only.

<sup>c</sup> No survey conducted

<sup>d</sup> Poor survey conditions.

<sup>e</sup> Beaver dam downstream of index area blocking passage of fish.

<sup>f</sup> Extreme low water conditions.

Table 46.—West Cook Inlet drainage coho salmon harvest by fishery, 1977–2017.

Year	Chuitna River	Beluga River	Theodore River	Lewis River	Kustatan River	Polly Creek	Big River Lakes <sup>a</sup>	Silver Salmon Creek	Other Susitna R.-N. Foreland	Other south of N. Foreland	Other <sup>b</sup>	Total
1977	316		113	103								532
1978	277		101	0								378
1979	287		50	0								337
1980	258		370	0								628
1981	594		10									604
1982	220		115			410						745
1983	554		10		1,800	188						2,552
1984	898		137		1,646							2,681
1985	1,095		261	75	4,889							6,320
1986	815		168		3,239							4,222
1987	1,684		996	145	5,723							8,548
1988	782		400	0	6,221							7,403
1989	1,228	419	502	112	5,413						9	7,683
1990	1,113		198	33	4,584		88					6,016
1991	1,791		513	181	5,768							8,253
1992	1,547	243	421		4,494	332						7,037
1993	1,313		236	194	6,457		158			751	1,217	10,326
1994	559		521		5,259		25			268	1,615	8,247
1995	1,407		372		4,237	641	75			559	891	8,182
1996	1,263		361		6,266	170	600		741	1,858	171	11,430
1997	1,156		187		3,605		305		574	632	33	6,492
1998	2,348		380		3,999		264		650	382	137	8,160
1999	1,614		290		3,178		463		1,282	2,047	465	9,339
2000	1,872		1,161		5,699		325		1,134	1,521		11,712
2001	3,284		1,029		4,920		508		1,210	2,998		13,949
2002	2,586		1,208	200	5,795		490		1,725	761	615	13,380
2003	1,467	426	225	197	3,967	190	2,830	2,269	429	1,611	628	14,239
2004	1,655	520	645	90	3,984	39	2,648	1,389	225	3,471	1,103	15,769

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Year	Chuitna River	Beluga River	Theodore River	Lewis River	Kustatan River	Polly Creek	Big River Lakes <sup>a</sup>	Silver Salmon Creek	Other Susitna R.-N. Foreland	Other south of N. Foreland	Other <sup>b</sup>	Total
2005	972	120	229	524	3,551		3,916	1,568	491	913	288	12,572
2006	531	313	282	177	3,556	73	3,953	997	360	1,538	160	11,940
2007	1,577	537	811	82	4,057	45	1,644	1,041	792	820	1,174	12,580
2008	1,401	490	31	29	3,868	285	3,560	356	122	967	3,564	14,673
2009	707	154	313	73	2,639	106	3,032	1,133	1,009	548	87	9,801
2010	257	244	178	77	2,832	79	3,627	714	130	892	0	9,030
2011	425	512	45	9	1,876	28	1,270	640	852	419	216	6,292
2012	770	338	116	27	2,136	0	1,634	419	734	974	665	7,813
2013	375	48	328	92	2,550	0	2,293	224	427	1,269	92	7,698
2014	251	985	202	0	1,822	61	2,737	409	0	761	92	7,320
2015	488	780	1,190	71	4,231	423	2,383	864	1,157	154	1,108	12,849
2016	0	0	536	0	1,700	236	1,082	702	956	817	0	6,029
Mean												
2012–2016	377	430	474	38	2,488	144	1,286	524	655	795	391	7,602
2017	571	166	109	0	1,540	0	1,720	286	0	436	0	4,828

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019).

Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> Wolverine Creek and other tributaries of Big River Lakes.

<sup>b</sup> Includes lakes and streams. Beginning in 1999, includes saltwater shoreline.



Table 47.—Northern Cook Inlet Management Area sport harvest of sockeye salmon by management unit, 1977–2017.

Year	Knik Arm	Eastside Susitna	Westside Susitna	West Cook Inlet	Total
1977	1,576	3,594	2,786	6	7,962
1978	1,239	267	1,634	0	3,140
1979	3,616	1,020	1,557	0	6,193
1980	5,674	873	1,111	0	7,658
1981	6,080	833	1,408	48	8,369
1982	4,621	1,555	2,881	10	9,067
1983	14,297	3,221	3,549	466	21,533
1984	9,240	2,705	3,415	249	15,609
1985	5,612	1,465	2,302	461	9,840
1986	6,009	4,029	4,076	89	14,203
1987	8,785	2,046	2,427	272	13,530
1988	8,076	2,857	3,167	473	14,573
1989	9,040	2,527	2,307	529	14,403
1990	6,588	2,677	1,938	636	11,839
1991	4,968	2,897	3,083	765	11,713
1992	5,349	3,468	2,916	188	11,921
1993	5,926	4,137	2,161	2,355	14,579
1994	5,082	3,443	1,919	2,035	12,479
1995	4,349	3,682	2,106	1,304	11,441
1996	4,307	2,675	1,115	2,951	11,048
1997	4,095	5,851	3,109	2,174	15,229
1998	5,499	5,859	2,463	2,522	16,343
1999	3,658	4,608	5,279	2,990	16,535
2000	7,536	6,509	4,946	4,244	23,235
2001	4,328	6,776	6,311	3,150	20,565
2002	4,619	3,427	1,881	2,019	11,946
2003	6,606	2,734	8,660	4,708	22,708
2004	7,148	3,107	3,358	3,323	16,936
2005	3,460	1,677	2,219	4,025	11,381
2006	4,622	1,412	626	4,993	11,653
2007	7,030	1,470	3,177	8,187	19,864
2008	6,695	2,975	1,428	5,652	16,750
2009	5,997	7,324	2,358	4,261	19,940
2010	5,630	3,944	1,505	5,232	16,311
2011	3,719	2,459	3,413	4,412	14,003
2012	2,685	4,277	1,118	4,966	13,046
2013	2,749	4,170	5,190	5,003	17,112
2014	2,252	3,325	2,759	6,796	15,132
2015	2,183	1,984	3,427	5,525	13,119
2016	2,657	3,960	3,381	5,738	15,736
2017	1,263	2,297	2,795	5,961	12,316
Mean					
1977–2017	5,241	3,174	2,860	2,662	13,936
2013–2017	2,505	3,543	3,175	5,636	14,860

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Table 48.—West Cook Inlet drainage sockeye salmon harvest by fishery, 1977–2017.

Year	Chuitna River	Theodore River	Lewis River	Kustatan River	Big River Lakes <sup>a</sup>	Susitna R.—N. Foreland	South of N. Foreland	Other <sup>b</sup>	Total
1977	6	0	0						6
1978	0	0	0						0
1979	0	0	0						0
1980	0	0	0						0
1981	48	0							48
1982	10	0							10
1983	356	0		110					466
1984	62	0		187					249
1985	274	25	0	162					461
1986	22	67		0					89
1987	272	0	0	0					272
1988	437	18	0	18					473
1989	43	52	0	165				269	529
1990	139	50	0	10	437				636
1991	552	10	0	203					765
1992	8	49		131					188
1993	46	35	0	289	976		229	780	2,355
1994	0	9		285	1,013		114	614	2,035
1995	62	0		44	998		159	41	1,304
1996	228	0		102	2,028	127	152	314	2,951
1997	170	0		274	1,171	150	409	0	2,174
1998	235	8		314	1,282	266	288	129	2,522
1999	194	0		186	1,783	76	464	287	2,990
2000	58	42		210	3,047	210	677	0	4,244
2001	634	0		293	992	201	1,030	0	3,150
2002	585	0	0	232	664	24	160	354	2,019
2003	179	24	0	397	3,491	94	372	151	4,708
2004	23	0		89	2,793	294	23	101	3,323
2005	123			95	3,401	121	139	146	4,025
2006	0	11	0	95	3,980	306	458	143	4,993
2007	104	0	0	102	7,028	252	568	133	8,187
2008	0	0	0	429	4,436	238	393	156	5,652
2009	0	0	0	157	3,746	120	238	0	4,261
2010	0	0	0	176	3,646	57	1,247	106	5,232
2011	17	0	0	0	3,932	307	156	0	4,412
2012	0	0	0	0	4,474	144	80	268	4,966
2013	19	0	0	228	4,025	162	569		5,003
2014	40	29	0	232	4,786	0	1,709	0	6,796
2015	0	0	0	123	3,893	231	1,278	0	5,525
2016	0	0	0	153	3,681	1,304	811	299	6,248
Mean									
2012–2016	12	6	0	147	4,202	368	889	142	5,738
2017	0	0	0	179	4,498	207	321	756	5,961

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited January 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> The majority of the harvest occurs at the mouth of Wolverine Creek.

<sup>b</sup> Includes lakes and streams. Beginning in 1999, this category includes saltwater shoreline.

Table 49.—Knik Arm drainage sockeye salmon harvest by fishery, 1977–2017.

Year	Little Susitna <sup>a</sup>	Knik River <sup>b</sup>	Eklutna Tailrace	Wasilla Creek	Cottonwood Creek	Big Lake <sup>c</sup>	Other <sup>d</sup>	Total
1977	888			274			414	1,576
1978	859			0			380	1,239
1979	1,478			0	1,525		613	3,616
1980	2,127			0	2,660		887	5,674
1981	1,619	450		0	3,245		766	6,080
1982	1,865	880		0	608		1268	4,621
1983	2,787	1,277		0	1,632		8601	14,297
1984	6,385	823	187	200	661		984	9,240
1985	2,894	1,037	142	120	1,179	109	131	5,612
1986	3,616	905	28	61	789	39	571	6,009
1987	3,513	1,105	254	18	869	1,087	1939	8,785
1988	2,310	1,928	200	36	346	2,037	1219	8,076
1989	2,315	1,322	204	98	683	2,900	1518	9,040
1990	891	2,219	29	19	271	2,238	921	6,588
1991	1,722	1,459	19	56	47	565	1100	4,968
1992	1,274	1,471	173	8	633	1,241	549	5,349
1993	2,487	1,041	211	134	453	598	1002	5,926
1994	1,809	1,258	133	76	807	476	523	5,082
1995	1,116	990	190	31	895	651	476	4,349
1996	2,286	1,077	84	42	444	68	306	4,307
1997	1,845	864	100	20	1,008	122	136	4,095
1998	872	1,220	57	212	2,906	154	78	5,499
1999	1,282	614	151	11	1,080	432	88	3,658
2000	3,661	1,543	764		1,118	21	429	7,536
2001	1,959	922	999		314	10	124	4,328
2002	2,133	1,268	529	12	319	147	211	4,619
2003	3,337	1,554	122	0	961	57	575	6,606
2004	2,776	2,499	491	33	719	400	230	7,148
2005	1,442	848	362	0	538	79	191	3,460
2006	1,556	2,173	289	260	279	0	65	4,622
2007	2,387	3,001	397	70	766	289	120	7,030
2008	1,699	4,187	81	30	672	26	0	6,695
2009	1,152	2,612	865	165	341	647	215	5,997
2010	1,257	2,440	689	242	256	632	114	5,630
2011	295	1,852	301	161	893	87	130	3,719
2012	506	1,348	45	0	193	548	45	2,685
2013	271	1,596	248	320	80	193	41	2,749
2014	66	1,021	557	69	238	242	59	2,252
2015	166	1,050	286	39	216	180	246	2,183
2016	136	1,692	439	32	822	262	35	3,418
Mean								
2012–2016	229	1,341	315	92	310	285	85	2,657
2017	62	452	47	0	446	0	256	1,263

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> Majority of harvest from Nancy Lake Creek.

<sup>b</sup> Knik River and tributaries including Jim Creek.

<sup>c</sup> Big Lake drainage streams.

<sup>d</sup> Includes Nancy Lake complex lakes, all marine harvest, and miscellaneous lakes and streams.

Table 50.—Eastside Susitna River drainage sockeye salmon harvest by fishery, 1977–2017.

Year	Willow Creek	Little Willow	Kashwitna River	Caswell Creek	Sheep Creek	Goose Creek	Montana Creek	Birch Creek	Sunshine Creek	Talkeetna River <sup>a</sup>	Other streams <sup>b</sup>	Other lakes	Total
1977	831	305			450		978			334	696		3,594
1978	56	28			14		85			28	56		267
1979	94	141		0	31		346		157	31	220		1,020
1980	83	77		77	0		257		116	6	257		873
1981	77	67		38	105		182		220	29	115		833
1982	94	105		52	88		514		189	115	398		1,555
1983	425	110	0	151	370		534		685	534	343	69	3,221
1984	249	337	0	87	62	0	561		100	636	636	37	2,705
1985	139	80		110	30		279		249	508	70	0	1,465
1986	290	0	109	0	0	0	363	182	290	1,597	1,198	0	4,029
1987	254	72	54	0	163	0	163	72	181	580	507	0	2,046
1988	564	55	18	164	273	36	364	255	18	1,110	0	0	2,857
1989	414	51	59	110	169	17	296	76	363	617	25	330	2,527
1990	208	149	99	69	149	50	149	0	119	1,506	179	0	2,677
1991	397	71	62	230	168	0	44	97	88	1,280	460	0	2,897
1992	526	164	33	123	189	58	370	140	394	1,356	115	0	3,468
1993	528	120	0	106	39	0	237	241	183	2,560	113	10	4,137
1994	383	28	0	82	102	0	85	66	133	2,278	286	0	3,443
1995	430	73	0	0	98	52	481	0	220	2,082	145	101	3,682
1996	113	191	0	95	8	67	88	0	43	2,053	17	0	2,675
1997	119	85	41	30	190	70	144	11	60	4,931	170	0	5,851
1998	86	43	0	0	103	0	195	30	68	4,546	788	0	5,859
1999	162	64	11	0	112	32	248	184	0	3,197	382	216	4,608
2000	307	55	0	42	122	0	346	213	199	4,683	225	317	6,509
2001	244	70	58	0	269	48	584	77	48	4,797	344	237	6,776
2002	215	31	0	0	122	30	199	0	31	2,615	110	74	3,427
2003	147	63	0	0	74	27	267	105	116	1,574	361	0	2,734
2004	110	45	0	0	20	0	336	33	109	2,399	55	0	3,107
2005	85	91	0	0	84	0	113	0	24	1,280	0	0	1,677

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Table 50.—Page 2 of 2.

Year	Willow Creek	Little Willow	Kashwitna River	Caswell Creek	Sheep Creek	Goose Creek	Montana Creek	Birch Creek	Sunshine Creek	Talkeetna River <sup>a</sup>	Other streams <sup>b</sup>	Other lakes	Total
2006	378	55	183	0	18	0	499	0	44	110	60	65	1,412
2007	90	201	0	0	45	0	89	0	0	952	93	0	1,470
2008	45	30	0	0	32	120	794	205	75	1,517	157	0	2,975
2009	96	13	36	0	48	17	184	299	50	6,137	444	0	7,324
2010	0	15	149	0	15	0	134	0	17	3,382	232	0	3,944
2011	185	0	0	15	0	0	0	186	56	1,458	559	0	2,459
2012	48	20	0	0	16	0	59	63	28	3,817	226	0	4,277
2013	171	43	0	0	0	0	98	14	0	3,527	317	0	4,170
2014	119	101	0	29	69	14	44	88	0	2,504	357	0	3,325
2015	60	0	0	0	0	61	27	16	0	1,730	90	0	1,984
2016	33	52	0	21	0	0	45	17	99	2,817	2958	0	6,042
Mean													
2012–2016	86	43	0	10	17	15	55	40	25	2,879	790	0	3,960
2017	79	83	0	0	40	0	17	0	0	1,683	395	0	2,297

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> Talkeetna River and tributaries including Clear Creek and Larson Creek.

<sup>b</sup> Other includes lakes and streams for 1977–1982.

Table 51.—Westside Susitna River drainage sockeye salmon harvest by fishery, 1977–2017.

Year	Alexander Creek	Deshka River	Rabideux Creek	Yentna River	Lake Creek	Fish Creek <sup>a</sup>	Talachulitna River	Judd Lake	Other streams <sup>b</sup>	Other lakes <sup>b</sup>	Total
1977	349	0			658		457	24	842	456	2,786
1978	183	0			254		141	70	662	324	1,634
1979	79	0			440		47	220	362	410	1,557
1980	52	0			267		112	267	34	379	1,111
1981	67	0			211		172		594	364	1,408
1982	335	0			252		63		1,320	911	2,881
1983	69	0			726		41	0	1,370	1,314	3,549
1984	87	125			374		262	312	1,395	860	3,415
1985	261	50			137		50		772	1,032	2,302
1986	0	11			547	1,273	424	514	1,173	134	4,076
1987	72	272			435	398	290	580	163	217	2,427
1988	55	146			291	146	800	182	1,038	509	3,167
1989	260	217	9	139	121	165	251	130	547	468	2,307
1990	30	189	0	20	358	89	189		646	417	1,938
1991	136	262	155	0	262	475	78	233	968	514	3,083
1992	123	82	0	107	115	189	205		1,331	764	2,916
1993	45	87		103	489	412	171		724	130	2,161
1994	38	0		237	430	142	237		653	182	1,919
1995	94	42		239	392	178	191		879	91	2,106
1996	0	8		0	137	68	108		794		1,115
1997	61	11		410	1,656	209	335		427	0	3,109
1998	86	57	0	232	868	168	181		871		2,463
1999	205	50		324	2,604	865	337		894	0	5,279
2000	1,440	339		761	1,767	226	162		251		4,946
2001	544	249		397	3,149	714	159		1062	37	6,311
2002	257	67		94	526	238	278		421	0	1,881
2003	138	0		137	6,900	162	233		1090	0	8,660
2004	0	154		247	1,977	392	339		249		3,358
2005	0	70		54	1,622	410	34		29		2,219

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Table 51.–Page 2 of 2.

Year	Alexander Creek	Deshka River	Rabideux Creek	Yentna River	Lake Creek	Fish Creek <sup>a</sup>	Talachulitna River	Judd Lake	Other streams <sup>b</sup>	Other lakes <sup>b</sup>	Total
2006	66	92	11	48	214	0	195	0			626
2007	30	128	0	604	1,341	221	816	37	0	0	3,177
2008	0	0	0	141	737	197	246	107	0	0	1,428
2009	0	10	0	547	1,256	37	11	0	497	0	2,358
2010	0	33	0	560	407	20	424	0	61	0	1,505
2011	0	0	0	497	1,351	131	737	0	697	0	3,413
2012	0	0	0	231	669	0	111	0	107	0	1,118
2013	0	0	0	392	3,739	0	994	0	65	0	5,190
2014	0	262	0	157	1,378	191	349	18	404	0	2,759
2015	0	54	0	34	2,461	80	665	113	20	0	3,427
2016	0	163	0	603	3,220	0	86	277	60	0	4,409
Mean											
2012–2016	0	96	0	283	2,293	54	441	82	131	0	3,381
2017	0	0	26	20	944	13	1157	20	457	158	2,795

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019).

Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> Yentna River drainage.

<sup>b</sup> May include harvest from West Cook Inlet waters.

Table 52.—Sockeye salmon escapement estimates from Knik Arm and Eastside Susitna River drainages in the Northern Cook Inlet Management Area, 1969–2018.

Year	Knik Arm					Eastside Susitna	
	Little Susitna River weir <sup>a</sup>	Fish Creek weir <sup>a</sup>	Cotton- wood Creek weir	Wasilla Creek weir	Jim Creek weir	Larson Lake weir	Stephan Lake weir
1969	ND	12,456	ND	ND	ND	ND	ND
1970	ND	25,000	ND	ND	ND	ND	ND
1971	ND	31,470	ND	ND	ND	ND	ND
1972	ND	6,981	ND	ND	ND	ND	ND
1973	ND	2,705	ND	ND	ND	ND	ND
1974	ND	16,225	ND	ND	ND	ND	ND
1975	ND	29,882	ND	ND	ND	ND	ND
1976	ND	14,032	ND	ND	ND	ND	ND
1977	ND	5,183	ND	ND	ND	ND	ND
1978	ND	3,555	ND	ND	ND	ND	ND
1979	ND	68,739 <sup>b</sup>	ND	ND	ND	ND	ND
1980	ND	62,828 <sup>b,c</sup>	ND	ND	ND	ND	ND
1981	ND	50,479 <sup>b,c</sup>	ND	ND	ND	ND	ND
1982	ND	28,164 <sup>c</sup>	ND	ND	ND	ND	ND
1983	ND	118,797 <sup>b,c</sup>	ND	ND	ND	ND	ND
1984	ND	192,352 <sup>b,c</sup>	ND	ND	ND	35,254 <sup>d</sup>	ND
1985	ND	68,577 <sup>b,c</sup>	ND	ND	ND	37,874 <sup>d</sup>	ND
1986	ND	29,800 <sup>b,c</sup>	ND	ND	ND	32,322 <sup>d</sup>	ND
1987	ND	91,215 <sup>b,c</sup>	ND	ND	ND	16,753 <sup>d</sup>	ND
1988	2,642	71,603 <sup>b,c</sup>	ND	ND	ND	ND	ND
1989	6,203	67,224 <sup>b,c</sup>	ND	ND	ND	ND	ND
1990	ND	48,717 <sup>b,c</sup>	ND	ND	ND	ND	ND
1991	ND	50,500 <sup>b,c</sup>	ND	ND	ND	ND	ND
1992	ND	72,108 <sup>b,c</sup>	ND	ND	ND	ND	ND
1993	ND	117,619 <sup>b,c</sup>	ND	ND	3,548	ND	ND
1994	16,918	100,638 <sup>b</sup>	ND	ND	5,197	ND	ND
1995	7,129	115,101 <sup>b</sup>	ND	ND	ND	ND	ND
1996	30	63,164 <sup>b</sup>	ND	ND	ND	ND	ND
1997	97	55,035 <sup>b</sup>	8,224	ND	ND	40,112	ND
1998	9	22,865 <sup>b</sup>	27,930	840	ND	63,514	ND
1999	72	26,725 <sup>b</sup>	39,572	854	ND	18,943	ND
2000	33	19,533 <sup>b</sup>	16,921	245	ND	11,822	ND
2001	94	43,498 <sup>b</sup>	15,229	198	ND	ND	ND
2002	235	90,482 <sup>b</sup>	6,791	1,354	ND	ND	ND
2003	124	91,952 <sup>b</sup>	4,601	757	ND	ND	ND
2004	200	22,157 <sup>b</sup>	3,127	<sup>f</sup>	ND	ND	ND
2005	1,700	14,215 <sup>b</sup>	<sup>f</sup>	<sup>f</sup>	ND	9,959	ND

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Table 52.—Page 2 of 2.

Year	Knik Arm					Eastside Susitna	
	Little Susitna River weir	Fish Creek weir <sup>a</sup>	Cotton-wood Creek weir	Wasilla Creek weir	Jim Creek weir <sup>c</sup>	Larson Lake weir	Stephan Lake weir
2006	60	32,562 <sup>b</sup>	f	f	ND	56,305	ND
2007	ND	27,948 <sup>b</sup>	f	f	ND	47,819	4,120
2008	38	19,339 <sup>b</sup>	f	f	ND	35,040	5,000
2009	74	83,480 <sup>b</sup>	f	f	ND	41,929	f
2010	72	126,836 <sup>b</sup>	f	f	ND	20,324	f
2011	22	66,678	f	f	ND	12,393	f
2012	249	18,823	f	f	ND	16,708	f
2013	367	18,912	f	f	ND	21,821	f
2014	900	43,915	f	f	ND	12,040	f
2015	1,499	102,367	f	f	4,917	23,185	f
2016	3,113	46,202	f	f	5,094	14,313	f
2017	1,189	63,882	f	f	4,778	31,687	f
Mean							
1979–2017	1,426	62,950	15,299	708	4,707	28,555	4,560
2008–2017	752	59,043	—	—	4,930	22,765	5,000
2013–2017	1,414	55,056	—	—	4,930	20,609	—
2018	338 <sup>e</sup>	72,157			2,375	23,652	
SEG		15,000–45,000				15,000–35,000	

*Note:* An en dash indicates that the value can't be computed due to limitations of the data and SEG is sustainable escapement goal.

*Source:* Little Susitna River weir: Bartlett and Vincent-Lang (1989), Bartlett and Sonnichsen (1990), Bartlett (1996a, 1996b). Jim Creek weir: L. Bartlett, Fisheries Biologist, ADF&G, Division of Sport Fish, Palmer, unpublished data.

<sup>a</sup> Fish Creek weir locations were river mile (RM) 0.6 in 1969–1982, about RM 7.5 in 1983–1991, and RM 3.0 (1992–2006).

<sup>b</sup> Hatchery-reared sockeye salmon contributed to Fish Creek drainage escapements in 1979–1981 and 1983–2010.

<sup>c</sup> Foot survey counts below the Fish Creek weir site are included in the 1980–1993 data.

<sup>d</sup> CIAA (1988b).

<sup>e</sup> Incomplete count.

<sup>f</sup> Project discontinued.

Table 53.—Sockeye salmon escapement estimates from Westside Susitna River and West Cook Inlet drainages in the Northern Cook Inlet Management Area, 1969–2018.

Year	Westside Susitna River							West Cook Inlet		
	Yentna River sonar	Chelatna Lake weir	Judd Lake weir	Shell Lake weir	Hewitt Lake weir	Byers Lake	Swan Lake	Crescent R. sonar	Packers Ck. weir <sup>a</sup>	Wolverine Ck. <sup>b</sup>
1969										
1970										
1971										
1972										
1973										
1974										
1975										
1976										
1977										
1978										
1979								87,000		
1980								91,000	16,477	
1981	139,401 <sup>c</sup>							41,000	13,024	17,822 <sup>d</sup>
1982	113,847 <sup>c</sup>							59,000	15,687	32,950 <sup>d</sup>
1983	104,414 <sup>c</sup>							92,000	18,403	18,189 <sup>d</sup>
1984	149,375 <sup>c</sup>							118,000	30,684	
1985	107,124 <sup>c</sup>							129,000	36,850	
1986	92,000			4,237 <sup>e</sup>					29,604	
1987	66,000							119,000	35,401	
1988	52,347							57,716	18,607	
1989	96,269							71,064	22,304	
1990	140,379			12,943 <sup>f</sup>				52,180	31,868	
1991	105,000							44,500	41,275	
1992	66,057							58,227	28,361	
1993	141,694	20,235 <sup>g</sup>						37,556	40,869	
1994	128,032	28,303 <sup>g</sup>						30,355	30,788	
1995	121,479	20,104 <sup>g</sup>						52,250	29,473	
1996	90,781	28,684 <sup>g</sup>						28,729	17,767	
1997	157,797	84,899 <sup>g</sup>						70,768	19,364	
1998	119,623	27,284 <sup>g</sup>	34,416					62,257	17,732	
1999	99,029							68,985	16,860	
2000	123,749							56,599	20,151	
2001	83,532							78,081		
2002	78,430							62,833		
2003	181,404							122,909		
2004	71,281							103,183		10,541 <sup>h</sup>
2005	36,921							125,787	22,000	15,625 <sup>h,i</sup>

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Table 53.—Page 2 of 2.

Year	Westside Susitna River							West Cook Inlet		
	Yentna River sonar	Chelatna Lake weir	Judd Lake weir	Shell Lake weir	Hewitt Lake weir	Byers Lake	Swan Lake	Crescent River sonar	Packers Creek weir <sup>a</sup>	Wolverine Creek <sup>b</sup>
2006	92,045	13,266	40,630	69,747	2,507	3,074		92,533		2,000 <sup>h,i</sup>
2007	79,901	11,671	58,134	26,784		1,701	5,489	79,406	46,637	
2008	90,146	73,469	54,304	2,624		1,492	4,037	62,030	25,247	
2009	j	17,865	43,153	4,961					16,473	
2010	j	37,784	18,361	2,222				86,333		
2011	j	70,353	39,997	937				81,952		
2012	j	36,577	18,303					58,838		
2013		70,555	14,088	133						
2014		26,212	22,416	6					19,242	
2015		69,897	47,934						28,072	
2016		61,054								
2017		26,952	35,729						17,164 <sup>k</sup>	
Mean										
1979–2017	104,573	43,571	34,584	12,406	7,725	2,089	4,763	74,408	25,228	16,188
2008–2017	90,146	49,173	32,844	1,814	—	1,492	4,037	72,288	21,240	—
2013–2017	—	50,934	30,042	70	—	—	—	—	21,493	—
2018		20,437	30,844						16,247 <sup>k</sup>	
SEG	<sup>l</sup>	20,000–45,000	15,000–40,000					30,000–50,000	15,000–30,000	

Source: Little Susitna River weir: Bartlett and Vincent-Lang (1989), Bartlett and Sonnichsen (1990), Bartlett (1996a, 1996b). Jim Creek weir: L. Bartlett, Fisheries Biologist, ADF&G, Division of Sport Fish, Palmer, unpublished data.

Note: An en dash indicates that the value can't be computed due to limitations of the data and SEG is sustainable escapement goal.

Note: Blank cells indicate no counts were conducted.

<sup>a</sup> A remote camera was used to count fish beginning in 2005.

<sup>b</sup> Tributary of Big River Lakes. A weir was operated by Cook Inlet Aquaculture Association (CIAA) from 1981 to 1983. A remote camera was operated by ADF&G from 2004 to 2006.

<sup>c</sup> Davis (2000).

<sup>d</sup> CIAA (1981–1982, 1984).

<sup>e</sup> CIAA (1987).

<sup>f</sup> CIAA (1991).

<sup>g</sup> CIAA (1998a).

<sup>h</sup> This was an incomplete count because of problems with the video cassette recording (VCR) tapes self-ejecting and because the digital video recorder (DVR) camera system was down for 2 weeks in 2005.

<sup>i</sup> Includes 5,000 fish counted at the mouth in 2005 and 2,000 counted in 2006 on the day the camera was pulled.

<sup>j</sup> Bendix sonar counts discontinued.

<sup>k</sup> Incomplete count.

<sup>l</sup> Sustainable escapement goal (SEG) of 90,000–160,000 and optimum escapement goal (OEG) of 75,000–185,000 discontinued after 2008.

Table 54.—Bodenburg Creek (Knik River drainage) salmon escapement index surveys, 1968–2018.

Year	Month	Date	Escapement index	
			Sockeye salmon	Chum salmon
1968	Aug	ND	350	0
1969	Sept	ND	125	0
1970	Aug	25	83	0
1971	Sept	5	110	0
1972	Aug	31	464	0
1973	Aug	27	208	0
1974	Sept	6	169	0
1975	Sept	3	148	0
	Sept	19	0	3
1976	Sept	8	111	0
1977	Aug	29	178	0
1978	Aug	29	541	0
1979	Aug	29	321	0
1980	Aug	25	483	0
1981	Aug	19	260	0
1982	Sept	17	722	0
1983	Aug	31	359	0
1984	ND	ND	ND	ND
1985	Sept	5	232	0
1986	Sept	4	119	120
1987	Sept	3	77	1
1988	ND	ND	ND	ND
1989	Aug	31	190	6
1990	Sept	7	195	3
1991	Aug	27	0	1
	Sept	6	160	0
1992	Aug	29	54	0
	Sept	2	66	4
1993	Aug	24	212	14
1994	Aug	25	220	0
	Sept	6	0	93
1995	Aug	28	156	219
1996	Sept	4	111	0
1997	Aug	28	142	4
1998	Aug	21	156	13
1999	Aug	30	257	21
2000	Aug	28	228	5
2001	Aug	29	232	8
2002	Aug	30	320	25
2003	Aug	22	402	3
2004	Aug	26	283	0
2005	Aug	29	269	0

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Table 54.–Page 2 of 2.

Year	Month	Date	Escapement index	
			Sockeye salmon	Chum salmon
2006	Aug	28	367	6
2007	Aug	24	164	2
2008	Aug	28	442	0
2009	Aug	26	540	0
2010	Aug	30	722	24
2011	Sept	2	493	1
2012	Sept	10	60	18
2013	Aug	28	491	2
2014	Aug	25	315	0
2015	Aug	27	753	17
2016	Aug	29	450	0
2017	Aug	28	467	1
Mean <sup>a</sup>				
1968–2017			269	12
2008–2017			473	6
2013–2017			495	4
2018	Aug	28	478	0

Source: ADF&G foot surveys.

Note: “ND” indicates there is no data because no attempts were made to collect it.

<sup>a</sup> Means include each escapement index. There may be multiple indexes for one year. Means do not include years with no data.

Table 55.—Northern Cook Inlet Management Area sport catch and harvest of rainbow trout by management unit, 1977–2017.

Year	Northern Cook Inlet Management Area										Southcentral Region		Statewide	
	Knik Arm		Eastside Susitna		Westside Susitna		West Cook Inlet		Total		Harvest	%	Harvest	%
	Catch <sup>a</sup>	Harvest	Catch <sup>a</sup>	Harv.	Catch <sup>a</sup>	Harv.	Catch <sup>a</sup>	Harv.	Catch <sup>a</sup>	Harv.				
1977		18,615		5,225		7,472		958		32,270	80,345	40.2	94,307	34.2
1978		23,139		5,930		12,295		723		42,087	107,243	39.2	120,231	35.0
1979		24,843		9,463		12,555		1,063		47,924	129,815	36.9	139,390	34.4
1980		29,368		6,715		12,785		560		49,428	126,686	39.0	153,476	32.2
1981		41,749		8,813		11,296		1,734		63,592	149,460	42.5	178,613	35.6
1982		30,549		7,536		11,465		398		49,948	142,579	35.0	173,242	28.8
1983		26,421		9,639		9,253		871		46,184	141,705	32.6	168,677	27.4
1984		26,418		7,656		8,079		748		42,901	128,649	33.3	170,117	25.2
1985		46,431		7,872		8,114		902		63,319	142,316	44.5	181,991	34.8
1986		27,690		8,061		6,668		223		42,642	114,873	37.1	152,855	27.9
1987		24,663		6,647		8,020		579		39,909	101,397	39.4	138,698	28.8
1988		58,609		7,622		8,058		673		74,962	155,960	48.1	241,831	31.0
1989		44,518		4,972		4,928		544		54,962	127,444	43.1	209,961	26.2
1990	98,720	30,699	21,806	5,008	33,510	3,960	3,115	472	157,151	40,139	122,987	32.6	191,809	20.9
1991	88,645	39,636	26,329	7,854	46,870	4,526	1,756	497	163,600	52,513	127,492	41.2	205,642	25.5
1992	85,331	27,995	19,915	3,948	23,621	2,028	1,448	190	130,315	34,161	97,730	35.0	139,973	24.4
1993	69,635	21,565	24,240	3,713	29,911	2,481	1,788	191	125,574	27,950	82,312	34.0	136,681	20.4
1994	70,255	22,446	23,619	3,658	25,157	2,526	871	225	50,371	28,855	76,384	37.8	112,261	25.7
1995	56,108	14,878	15,363	3,138	23,432	1,757	1,222	111	40,217	19,884	74,972	26.5	112,681	17.6
1996	80,757	21,780	24,808	2,510	33,603	1,924	1,696	439	60,139	26,653	84,573	31.5	136,482	19.5
1997	85,278	25,695	34,742	2,324	30,217	1,452	2,371	618	67,507	30,089	67,261	44.7	100,372	30.0
1998	66,837	17,693	26,241	968	17,370	1,081	1,576	189	45,667	19,931	56,728	35.1	103,744	19.2
1999	84,691	24,527	39,753	1,755	37,864	1,866	2,617	277	80,365	28,425	77,707	36.6	132,481	21.5
2000	114,013	28,745	42,603	1,521	29,398	1,226	2,793	211	75,037	31,703	89,171	35.6	144,873	21.9
2001	70,821	21,061	32,904	1,112	27,697	759	3,341	270	65,140	23,202	57,629	40.3	81,279	28.5
2002	93,520	28,325	80,190	1,751	29,745	1,209	3,082	236	113,405	31,521	73,542	42.9	117,063	26.9
2003	68,212	17,617	59,440	2,581	40,327	1,425	1,698	264	102,044	21,887	53,155	41.2	84,531	25.9
2004	70,897	17,738	46,130	1,924	42,969	1,629	1,258	177	90,568	21,468	56,082	38.3	85,136	25.2
2005	59,870	14,367	36,188	793	46,575	339	791	196	84,785	15,695	39,790	39.4	60,826	25.8

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Table 55.—Page 2 of 2.

Year	Northern Cook Inlet Management Area										Southcentral Region		Statewide	
	Knik Arm		Eastside Susitna		Westside Susitna		West Cook Inlet		Total					
	Catch <sup>a</sup>	Harvest	Catch <sup>a</sup>	Harv.	Catch <sup>a</sup>	Harv.	Catch <sup>a</sup>	Harv.	Catch <sup>a</sup>	Harv.	Harvest	% NCIMA	Harvest	% NCIMA
2006	48,064	13,524	38,862	1,590	44,018	1,027	1,538	170	84,960	16,311	33,119	49.2	53,086	30.7
2007	40,742	10,613	64,077	840	32,036	619	2,124	216	98,367	12,288	30,361	40.5	50,231	24.5
2008	67,585	15,537	36,798	1,521	18,063	744	1,276	106	56,381	17,908	36,334	49.3	49,159	36.4
2009	39,983	7,981	36,707	691	27,455	865	1,322	10	65,510	9,547	23,365	40.9	35,976	26.5
2010	42,267	10,845	39,958	1,826	20,232	434	746	89	61,085	13,194	25,712	51.3	38,941	33.9
2011	44,805	9,368	63,725	977	38,060	341	843	43	102,740	10,729	23,073	46.5	32,098	33.4
2012	29,680	8,294	27,446	623	24,718	179	376	102	52,583	9,198	21,912	42.0	29,942	30.7
2013	52,070	9,195	44,029	1,248	20,178	468	876	0	117,153	10,911	29,931	36.5	40,589	26.9
2014	46,671	9,286	33,899	1,160	40,833	872	1,546	32	122,949	11,350	26,312	43.1	37,722	30.1
2015	51,799	10,265	49,431	468	38,294	494	880	61	140,404	11,288	38,039	29.7	62,812	18.0
2016	46,599	10,495	39,576	1,281	19,406	418	770	0	106,351	12,194	32,335	37.7	53,461	22.8
Mean 1977–2016	65,698	22,830	38,103	3,823	31,169	3,941	1,619	384	136,589	30,978	80,162	38.6	113,831	27.2
2012–2016	45,364	9,507	38,876	956	28,686	486	890	39	113,815	10,988	29,706	37.8	44,905	25.7
2017	51,065	9,375	25,774	817	5,988	362	585	0	83,412	10,554	28,306	37.3	41,839	25.2

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019).

Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

<sup>a</sup> Catch data not available until 1990.

Table 56.—Eastside Susitna River drainage rainbow trout harvest by fishery, 1977–2017.

Year	Willow Creek	Little Willow	Kashwitna River	Caswell Creek	Sheep Creek	Goose Creek	Montana Creek	Birch Creek	Sunshine Creek	Talkeetna River <sup>a</sup>	Other Streams <sup>b</sup>	Other Lakes	Total
1977	1,055	224			368		727			450	2,401		5,225
1978	913	334			470		1,193			1,501	1,519		5,930
1979	1,500	345		282	573		1,536		382	1,373	3,472		9,463
1980	1,168	353		154	385		854		193	950	2,658		6,715
1981	1,475	374		326	201		1,111		249	1,226	3,851		8,813
1982	891	335		189	325		2,243		545	608	2,400		7,536
1983	1,689	514	357	231	409		1,332		178	1,836	1,656	1,437	9,639
1984	1,359	1,047	449	175	349	125	1,197		374	910	598	1,073	7,656
1985	2,046	746		139	191		1,248		416	832	1,266	988	7,872
1986	545	218	436	0	218	145	399	73	581	1,234	1,126	3,086	8,061
1987	1,141	1,213	471	308	507	272	417	36	72	869	471	870	6,647
1988	1,128	400	255	73	236	291	1,492	73	55	1,110	636	1,873	7,622
1989	906	277	675	37	240	240	407	37	259	822	443	629	4,972
1990	1,008	286	352	101	286	353	487		168	1,109	320	538	5,008
1991	2,044	430	261	384	569	354	615	231	0	1,076	999	891	7,854
1992	712	293	87	47	55	79	467	16	79	665	404	1,044	3,948
1993	934	264	49	148	338	127	271	0	59	242	670	611	3,713
1994	1,161	337	114	53	254	173	241	0	8	262	467	588	3,658
1995	351	250	0	56	79	28	285	0	0	287	442	1,360	3,138
1996	551	113	63	21	73	68	443	0	95	284	354	445	2,510
1997	0	182	137	24	208	179	0	0	24	226	636	708	2,324
1998	0	113	42	0	157	42	0	17	144	179	173	101	968
1999	0	77	82	0	94	152	0	24	0	207	489	630	1,755
2000	91	48	61	12	189	36	0	0	7	197	265	615	1,521
2001	119	42	22	42	131	77	0	0	8	92	315	264	1,112
2002	209	54	37	0	248	58	0	0	0	90	150	905	1,751
2003	61	65	194	31	163	54	0	0	0	299	305	1409	2,581
2004	144	23	0	0	58	70	0	47	0	157	259	1166	1,924
2005	32	64	11	0	51	22	0	0	0	61	101	451	793

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Table 56.–Page 2 of 2.

Year	Willow Creek	Little Willow	Kashwitna River	Caswell Creek	Sheep Creek	Goose Creek	Montana Creek	Birch Creek	Sunshine Creek	Talkeetna River <sup>a</sup>	Other Streams <sup>b</sup>	Other Lakes	Total
2006	103	94	73	22	52	34	0	12	0	125	43	1032	1,590
2007	10	71	0	0	157	0	0	0	0	186	216	200	840
2008	60	210	61	0	79	138	0	0	178	511	31	253	1,521
2009	62	96	0	0	0	18	0	0	13	34	167	366	756
2010	84	135	9	20	288	239	0	0	0	85	97	869	1,826
2011	0	0	101	202	88	0	0	0	0	154	102	411	1,058
2012	0	0	0	0	21	38	0	50	50	78	53	333	623
2013	0	41	0	0	69	123	0	0	0	208	122	685	1,248
2014	0	185	153	0	312	254	0	0	82	0	14	160	1,160
2015	0	63	0	0	44	33	0	0	0	115	90	123	468
2016	0	194	68	0	43	0	0	0	64	21	147	744	1,281
Mean													
2012–2016	0	97	44	0	98	90	0	10	39	84	85	409	956
2017	0	23	0	0	23	0	0	0	0	18	171	582	817

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019).

Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> Talkeetna River and tributaries including Clear Creek

<sup>b</sup> Includes lakes and streams, 1977–1982.

Table 57.—Eastside Susitna River drainage rainbow trout catch by fishery, 1990–2017.

Year	Willow Creek	Little Willow	Kashwitna River	Caswell Creek	Sheep Creek	Goose Creek	Montana Creek	Birch Creek	Sunshine Creek	Talkeetna River <sup>a</sup>	Other Streams	Other Lakes	Total
1990	3,914	689	1,630	689	840	1,378	1,277		622	4,788	3,913	2,066	21,806
1991	3,965	1,230	692	446	1,076	2,183	2,136	307	154	5,072	6,347	2,721	26,329
1992	3,206	1,124	293	142	633	617	2,501	40	103	5,581	2,754	2,921	19,915
1993	3,934	829	995	217	967	2,054	2,034	49	407	5,685	4,441	2,628	24,240
1994	4,673	2,024	319	172	757	1,566	1,807	56	56	4,687	2,838	4,664	23,619
1995	2,340	730	178	127	506	280	1,245	47	150	3,510	3,078	3,172	15,363
1996	4,766	1,077	654	21	2,077	384	2,828	0	179	6,790	3,049	2,983	24,808
1997	5,198	1,415	2,177	60	2,008	2,139	3,473	179	60	7,040	5,355	5,638	34,742
1998	4,487	1,259	1,593	93	4,885	333	4,138	135	186	4,560	2,492	2,080	26,241
1999	11,965	2,484	1,016	72	1,415	960	5,337	140	465	7,402	5,188	3,309	39,753
2000	8,836	1,920	2,107	145	2,173	3,175	7,236	569	132	6,669	3,740	5,901	42,603
2001	11,510	1,414	882	184	763	1,103	5,678	123	17	5,937	2,844	2,449	32,904
2002	22,650	2,821	1,402	105	9,308	4,063	19,170	45	66	11,312	5,164	4,084	80,190
2003	13,750	3,576	2,315	344	5,289	1,691	12,393	54	97	7,875	5,191	6,865	59,440
2004	10,920	2,293	698	58	1,869	1,835	10,171	540	351	6,384	6,961	4,050	46,130
2005	10,863	2,878	961	11	2,218	685	6,151	133	183	6,772	1,759	3,574	36,188
2006	10,032	1,744	993	46	2,716	1,121	7,610	60	24	7,653	4,997	1,866	38,862
2007	20,905	2,800	163	191	4,244	506	16,740	0	12	8,766	9,005	745	64,077
2008	8,235	2,597	1,068	78	1,769	746	8,014	909	632	7,889	3,649	1,212	36,798
2009	14,700	1,707	558	269	1,137	237	6,474	26	30	6,482	4,156	1,713	37,489
2010	10,689	2,260	24	20	5,495	1,567	6,409	0	14	5,266	4,746	3,468	39,958
2011	19,557	1,109	729	1,242	5,709	976	9,836	91	53	6,769	8,125	3,523	57,719
2012	8,207	602	326	50	870	1,061	8,590	210	441	3,730	2,749	610	27,446
2013	8,973	1,109	103	0	459	2,618	17,636	78	116	7,379	3,641	1,917	44,029
2014	13,566	1,090	1,307	48	1,830	1,924	8,348	89	273	1,990	2,987	447	33,899
2015	14,168	2,326	313	0	2,597	193	8,482	33	89	17,987	2,276	967	49,431
2016	13,238	4,443	728	425	934	2,020	4,514	18	82	4,437	5,553	3,184	39,576
Mean													
2012–2016	11,630	1,914	555	105	1,338	1,563	9,514	86	200	7,105	3,441	1,425	38,876
2017	7,116	1,022	137	0	128	229	4,200	0	0	3,398	4,755	4,789	25,774

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019).

Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> Talkeetna River and tributaries including Clear Creek.

Table 58.—Westside Susitna River drainage rainbow trout harvest by fishery, 1977–2017.

Year	Alexander Creek	Deshka River	Rabideux Creek	Yentna River	Peters Creek	Lake Creek	Fish Creek <sup>a</sup>	Judd Lake	Other Streams <sup>b</sup>	Other Lakes <sup>b</sup>	Total
1977	1,251	1,556				1,853		68	1,677	1,067	7,472
1978	2,640	3,634				2,721		0	1,528	1,772	12,295
1979	1,182	3,182				4,527		100	2,709	855	12,555
1980	1,945	4,305				2,144		86	2,101	2,204	12,785
1981	2,290	3,631				2,874			872	1,629	11,296
1982	2,505	3,804				3,134			597	1,425	11,465
1983	608	2,434				2,287		0	2,917	1,007	9,253
1984	785	2,120			611	3,080		0	1,084	399	8,079
1985	1,318	3,104				1,439			1,387	866	8,114
1986	1,553	3,038				961	45	0	614	457	6,668
1987	978	3,006				1,902	398	0	1,357	379	8,020
1988	1,419	4,075			73	1,146	109	18	672	546	8,058
1989	486	1,676	0	38	162	676	428	105	576	781	4,928
1990	640	707	17	0	303	808	135		810	540	3,960
1991	917	1,275	0	140	295	498	358	0	810	233	4,526
1992	198	459	24	127	214	214	79		349	364	2,028
1993	128	452		36	49	184	172		1,163	297	2,481
1994	207	415		123	146	714	93		613	215	2,526
1995	86	183		140	46	565	360		588	89	2,057
1996	95	321		146	227	616	51		468		1,924
1997	0	264		0	80	436	56		616		1,452
1998	0	218		0		285	124		454		1,081
1999	0	561		59	70	640	168		368		1,866
2000	0	205		151	71	567	85		147	0	1,226
2001	0	270		156	56	183	33		20	41	759
2002	13	417		0	29	445	119		186	0	1,209
2003	0	368		154	48	561	77		217	0	1,425
2004	0	938		0	23	587	27		54	0	1,629
2005	0	60		52	11	209	0		7	0	339

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Table 58.—Page 2 of 2.

Year	Alexander Creek	Deshka River	Rabideux Creek	Yentna River	Peters Creek	Lake Creek	Fish Creek <sup>a</sup>	Judd Lake	Other Streams <sup>b</sup>	Other Lakes <sup>b</sup>	Total
2006	0	523		96	39	159	198	0	0	12	1,027
2007	0	185	29	52	117	236	0	0	0	0	619
2008	0	419	0	134	10	153	13	0	0	15	744
2009	0	562	0	86	122	27	0	0	43	25	865
2010	0	122	0	57	0	154	0	0	0	101	434
2011	0	0	20	119	27	143	0	26	72	107	514
2012	0	61	11	0	0	76	0	0	31	0	179
2013	0	103	0	0	0	174	0	0	191	0	468
2014	0	29	0	65	0	568	18	0	192	0	872
2015	0	166	0	17	0	200	0	0	111	0	494
2016	0	32	0	66	63	175	0	0	18	64	418
Mean											
2012–2016	0	78	2	30	13	239	4	0	109	13	486
2017	0	0	0	0	46	40	20	0	15	241	362

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019).

Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> Fish Lake drainage (Yentna River drainage).

<sup>b</sup> May include harvest from West Cook Inlet waters through 1995.

Table 59.—Westside Susitna River drainage rainbow trout catch by fishery, 1990–2017.

Year	Alexander Creek	Deshka River	Rabideux Creek	Yentna River	Peters Creek	Lake Creek	Fish Creek <sup>a</sup>	Talachulitna River	Other Streams <sup>b</sup>	Other Lakes <sup>b</sup>	Total
1990	3,065	6,197	34	135	1,532	8,757	707	10,761	2,474	1,431	35,093
1991	2,301	5,303	16	295	1,182	12,969	1,415	18,489	2,863	2,037	46,870
1992	1,124	3,396	142	214	633	5,399	768	7,892	2,123	1,930	23,621
1993	992	5,772		101	331	9,232	647	8,824	3,329	683	29,911
1994	1,075	3,345		201	646	10,387	740	6,646	1,536	763	25,339
1995	472	2,288		1,638	644	5,546	596	6,286	3,499	2,463	23,432
1996	195	4,166		507	709	7,655	572	16,488	3,311		33,603
1997	1,034	2,355		232	331	9,378	1,379	12,535	2,973		30,217
1998	490	1,594		846		6,668	641	4,336	2,795		17,370
1999	643	5,323		446	152	15,310	2,144	11,072	2,774		37,864
2000	759	6,146		1,774	1,435	12,156	833	5,209	1,086		29,398
2001	1,335	8,300		1,879	375	7,739	1,335	7,027	727	75	28,792
2002	728	4,464		518	1,954	11,622	679	6,283	3,497	0	29,745
2003	313	5,868		768	510	22,460	176	9,721	511	0	40,327
2004	220	5,868		1,514	381	22,130	2,411	9,000	150	1,295	42,969
2005	64	3,161		2,521	838	21,197	260	17,060	1,433	41	46,575
2006	402	9,635		1,752	195	28,013	395	2,883	707	36	44,018
2007	106	3,905	58	3,728	663	11,405	173	11,846	152	0	32,036
2008	0	2,070	0	1,974	268	10,267	624	2,249	580	31	18,063
2009	34	3,093	0	2,723	812	10,217	479	6,331	3,766	0	27,455
2010	0	1,334	0	1,886	326	10,011	122	5,242	734	1,130	20,785
2011	43	2,156	101	1,376	53	23,420	0	8,647	2,520	852	39,168
2012	0	556	24	1,238	0	12,321	204	7,109	3,249	17	24,718
2013	123	731	0	794	449	9,015	52	5,433	2,408	1,173	20,178
2014	250	1,951	56	1,169	646	23,717	36	11,032	1,210	766	40,833
2015	0	624	0	439	320	13,955	1,127	12,798	7,251	1,780	38,294
2016	0	924	0	1,080	236	10,052	23	3,914	2,909	268	19,406
Mean											
2012–2016	75	957	16	944	330	13,812	288	8,057	3,405	801	28,686
2017	87	710	0	1,169	229	2,525	20	737	53	2,010	7,540

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019).

Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> Fish Lake drainage (Yentna River drainage).

<sup>b</sup> May include catch from West Cook Inlet waters through 1995.

Table 60.—Knik Arm drainage rainbow trout harvest for Little Susitna River, Knik River, Wasilla Creek, Cottonwood Creek, Big Lake, Wasilla Lake, Finger Lake, Kepler Lake complex, and Lucille Lake drainages, 1977–2017.

Year	Little Susitna	Knik River <sup>a</sup>	Wasilla Creek	Cotton- wood Ck	Big Lake <sup>b</sup>	Wasilla Lake	Finger Lake	Kepler L. Complex	Big Lake	Lucille Lake
1977	843		252				0	1,822	3,906	0
1978	886		45				0	5,180	4,845	0
1979	1,391		500	1,736		2,782	0	3,372	2,882	0
1980	852		121	1,085		2,084	0	5,906	5,398	0
1981	2,692	0	38	824		2,261	0	8,200	9,810	0
1982	1,551	0	63	786		2,243	0	7,325	9,369	0
1983	1,290	0	84	556		1,804	0	3,986	4,102	0
1984	860	549	312	748		848	0	9,128	4,938	0
1985	1,294	780	260	590	347	1,231	3,381	14,011	6,953	35
1986	1,407	235	11	145	391	1,653	3,172	7,249	5,105	168
1987	447	58	126	301	204	680	2,476	7,758	2,476	3,379
1988	1,273	382	582	782	309	891	5,421	16,462	4,220	8,495
1989	599	0	91	163	1,063	972	2,788	18,233	5,402	972
1990	673	0	131	410	361	443	2,544	10,223	3,282	246
1991	781	0	28	628	209	1,953	2,539	8,496	4,883	600
1992	720	0	24	404	791	483	1,860	6,839	2,090	309
1993	186	0	30	475	228	630	2,037	2,930	2,073	424
1994	300	0	135	425	393	735	2,666	3,551	2,260	156
1995	326	0	37	413	150	390	1,887	2,648	1,371	249
1996	121	0	40	248	74	1,735	2,316	5,092	2,260	
1997	348	0	29	215	321	475	3,720	8,407	2,083	335
1998	59	0	0	390	412	483	1,804	3,167	1,358	214
1999	253	0	0	93	2,114	762	3,301	5,391	1,501	
2000	252	0		218	355	1,037	3,511	7,469	1,475	116
2001	253	0		613	182	305	1,534	4,197	905	1,107
2002	154	0	0	290	236	329	5,608	3,498	1,521	989
2003	140	0	0	32	11	511	1,326	3,625	884	1,194
2004	93	82	0	290	23	264	1,527	4,423	626	842
2005	51	22	88	44	0	535	1,358	3,657	752	391
2006	166	0	0	115	15	115	1,566	2,419	1,005	996
2007	197	0	0	802	11	131	573	1,903	332	79
2008	147	0	19	199	53	628	2,156	3,696	785	64
2009	79	0	52	9	30	89	893	2,497	299	148
2010	203	0	0	88	117	95	1,520	1,916	551	0
2011	13	24	0	61	0	289	2,095	1,637	887	101
2012	33	0	0	0	0	140	821	973	492	175
2013	101	0	0	0	0	82	1,665	2,698	488	0
2014	12	0	97	376	139	96	942	2,475	703	281
2015	346	0	44	22	88	234	1,768	2,201	923	164
2016	59	0	0	129	64	172	1,773	1,834	710	162
Mean										
2012–2016	110	0	28	105	58	145	1,394	2,036	663	156
2017	0	0	41	110	18	817	1,185	1,664	711	133

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> Knik River and tributaries including Jim Creek.

<sup>b</sup> Big Lake drainage streams.

Table 61.—Knik Arm drainage rainbow trout harvest for Kalmbach Lake, Carpenter Lake, Knik Lake, Memory Lake, Seymour Lake, Bonnie Lakes, Nancy Lake complex, and other lakes and streams, and total KAMU harvest; 1977–2017.

Year	Kalmbach Lake	Carpenter Lake	Knik Lake	Memory Lake	Seymour Lake	Bonnie Lakes	Nancy L. Complex	Other streams <sup>a</sup>	Other lakes	KAMU total
1977							2,642	9,150		18,615
1978							1,853	10,330		23,139
1979							2,909	9,271		24,843
1980							2,540	11,382		29,368
1981							4,723	13,201		41,749
1982							2,840	6,372		30,549
1983							4,846	1,490	8,263	26,421
1984				382			1,771	1,247	5,635	26,418
1985							2,514	1,197	13,838	46,431
1986					726	736	2,200	815	3,677	27,690
1987							2,728	427	3,603	24,663
1988						910	5,439	964	12,479	58,609
1989	1,625		872	590	445	945	3,696	117	5,945	44,518
1990						738	2,182	1,131	8,335	30,699
1991			600	1,046		363	2,818	545	14,147	39,636
1992	610	1,116	887	364	459	1,045	2,945	8	7,041	27,995
1993				890	734	399	2,116	248	8,165	21,565
1994				323	570	1,184	1,300	56	8,392	22,446
1995	543	393		395		365	785	119	4,797	14,878
1996	221			53			753	189	8,678	21,780
1997				406		520	963	72	7,806	25,695
1998			984				321	42	8,459	17,693
1999			713			572	611	81	9,135	24,527
2000			1,569			223	1,900	84	10,536	30,745
2001	92	42	634	604	117	81	1,349	25	9,021	23,062
2002	359	29	907	408	17	223	916	535	12,306	30,327
2003	98	230	786	247	224	107	1,601	0	6,601	19,620
2004	175	79	226	234	517	26	525	21	7,765	19,742
2005	155	44	66	395	144	22	771	120	5,752	16,372
2006	60	24	521	132	147	231	1,032	19	4,961	15,530
2007	236	29	117	0	69	94	1,078	53	4,909	12,620
2008	49	319	394	107	143	71	174	18	6,515	17,545
2009	61	100	216	502	54	88	274	0	2,590	9,990
2010	117	616	596	113	15	178	15	240	4,465	12,855
2011	0	0	385	290	81	61	40	56	3,490	11,521
2012	488	32	0	0	182	111	0	146	4,701	10,306
2013	164	0	343	321	219	146	102	82	2,784	11,208
2014	0	153	217	209	124	110	107	151	3,094	11,300
2015	0	0	450	499	155	95	414	102	2,760	12,280
2016	23	107	161	136	86	268	379	12	4,420	12,511
Mean										
2012–2016	135	58	234	233	153	146	200	99	3,552	11,521
2017	29	0	44	183	0	259	259	0	3,922	11,392

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> Includes lakes and streams, 1977–1982.

Table 62.—Knik Arm drainage rainbow trout catch for Little Susitna River, Knik River, Wasilla Creek, Cottonwood Creek, Big Lake, Wasilla Lake, Finger Lake, Kepler Lake complex, and Lucille Lake drainages, 1990–2017.

Year	Little Susitna	Knik River <sup>a</sup>	Wasilla Creek	Cottonwood Ck	Big Lake <sup>b</sup>	Wasilla Lake	Finger Lake	Kepler L. Complex	Big Lake	Lucille Lake
1990	1,953	0	607	2,183	2,100	1,707	5,645	35,085	8,123	1,034
1991	1,507	0	28	795	614	2,916	4,576	18,986	10,588	670
1992	2,319	0	40	1,987	2,375	1,544	6,087	24,887	5,296	602
1993	1,308	0	195	3,987	1,445	1,497	7,272	16,151	4,845	651
1994	1,198	0	312	911	2,295	2,142	6,168	16,534	5,502	302
1995	1,783	0	92	1,015	412	1,001	5,792	16,634	3,565	514
1996	323	0	40	1,153	171	4,384	6,494	24,201	8,023	
1997	1,029	0	53	992	476	938	9,218	27,065	6,357	610
1998	319	0	94	1,878	1,276	1,405	6,789	16,175	5,298	1,385
1999	1,658	0	49	1,903	2,243	2,287	5,602	20,169	6,569	
2000	1,567			957	1,081	2,144	9,327	27,859	7,212	1,161
2001	1,794	0	58	3,016	548	1,499	4,313	16,349	4,546	3,616
2002	1,319	0	0	1,628	2,114	896	9,753	17,330	4,601	6,193
2003	1,568	0	130	1,727	206	2,230	5,217	16,575	5,614	4,842
2004	1,368	1,414	0	726	1,239	1,720	5,030	19,991	3,253	2,330
2005	772	259	221	628	33	1,468	4,833	13,823	5,937	1,727
2006	1,583	944	0	1,500	159	224	5,221	12,348	2,975	2,896
2007	995	0	94	3,612	213	657	1,851	9,737	3,039	695
2008	792	0	187	885	53	2,319	6,631	16,838	5,381	755
2009	644	34	496	255	245	774	4,867	14,712	2,963	777
2010	1,071	118	29	440	2,292	271	3,774	10,736	2,699	498
2011	352	35	101	162	20	353	5,444	13,609	5,278	455
2012	288	0	13	33	338	353	3,611	5,902	1,858	576
2013	253	0	0	330	20	475	8,129	18,190	4,033	1,038
2014	163	0	242	985	973	251	4,345	14,784	5,466	1,422
2015	1,544	0	89	44	308	1,047	5,915	12,070	5,677	2,652
2016	1,053	0	0	3,276	107	789	5,485	9,379	1,941	1,705
Mean										
2012–2016	660	0	69	934	349	583	5,497	12,065	3,795	1,479
2017	107	0	122	110	18	4,046	3,351	7,344	3,426	659

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

Note: Blank cells indicate no data.

<sup>a</sup> Knik River and tributaries including Jim Creek.

<sup>b</sup> Big Lake drainage streams.



Table 63.—Knik Arm drainage rainbow trout catch for Kalmbach Lake, Carpenter Lake, Knik Lake, Memory Lake, Seymour Lake, Bonnie Lakes, Nancy Lake complex, and other lakes and streams, and total KAMU catch; 1990–2017.

Kalmbach Lake	Carpenter Lake	Knik Lake	Memory Lake	Seymour Lake	Bonnie Lakes	Nancy L. Complex	Other streams	Other lakes	KAMU total
					2,133	7,466	5,448	25,236	98,720
		2,246	1,576		893	6,348	2,371	34,531	88,645
3,103	1,868	1,504	1,314	712	3,309	7,765	64	20,555	85,331
			1,523	1,224	2,356	5,130	367	21,684	69,635
			1,230	1,413	2,657	4,372	282	24,932	70,255
1,067	824		863		1,331	2,344	209	18,662	56,108
252			727			1,966	409	32,614	80,757
			968		1,253	3,098	359	32,862	85,278
	3,324	3,324				1,173	151	27,570	66,837
		1,746			1,658	3,538	421	36,848	84,691
		4,163			1,834	7,273	443	48,992	116,013
215	1,040	1,447	2,098	175	328	3,874	351	25,554	72,822
755	87	2,037	1,804	268	586	4,361	934	38,854	95,522
455	1,685	1,698	343	1989	311	3,767	86	19,769	70,215
1554	79	862	1,531	587	119	4,184	106	24,804	72,901
464	376	0	1,828	199	508	1,994	485	24,315	61,875
360	271	576	827	202	709	2,828	62	14,379	50,070
870	190	204	278	748	709	2,371	154	14,325	42,749
637	810	2,002	145	933	1,123	8,530	935	18,629	69,593
249	118	277	1,687	274	407	1,711	52	9,441	41,992
323	821	882	158	69	1,046	695	189	16,156	44,277
89	223	1,174	411	613	202	73	283	10,650	41,538
803	49	0	0	538	1,090	283	347	13,799	31,893
1,297	0	596	1,587	423	2,462	676	82	12,418	54,022
70	344	535	349	286	689	1,306	468	13,993	48,685
0	0	2,836	2,646	1594	322	1,116	205	13,734	53,814
718	171	161	446	118	1,780	1,435	30	18,005	48,615
578	113	826	1,006	592	1,269	963	226	14,390	47,406
58	976	163	2,436	218	6,899	2,896	177	18,059	53,082

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: Blank cells indicate no data.

Table 64.—Northern Cook Inlet Management Area sport catch (C) and harvest (H) of northern pike by management unit, 1977–2017.

Year	Northern Cook Inlet Management Area <sup>a</sup>													
	Knik Arm <sup>b</sup>		Eastside Susitna		Westside Susitna		West Cook Inlet		Total		Southcentral Region		Statewide	
	C <sup>c</sup>	H	C <sup>c</sup>	H	C <sup>c</sup>	H.	C <sup>c</sup>	H	C <sup>c</sup>	H	H	% NCIMA	H	% NCIMA
1977		0				132		0		132	321	41.1	11,982	1.1
1978		0				316		0		316	767	41.2	12,520	2.5
1979		0				382		0		382	762	50.1	12,741	3.0
1980		0				232		0		232	1,358	17.1	17,000	1.4
1981		0				125		0		125	1,411	8.9	16,536	0.8
1982		0				607		0		607	1,707	35.6	18,964	3.2
1983		0				944		0		944	2,642	35.7	21,476	4.4
1984		0				1,821		0		1,821	4,424	41.2	18,641	9.8
1985		156				1,248		0		1,404	2,240	62.7	17,943	7.8
1986		458				1,519		0		1,977	2,894	68.3	21,890	9.0
1987		924				1,540		0		2,464	4,839	50.9	19,079	12.9
1988		364				2,818	291			3,473	3,598	96.5	23,440	14.8
1989		863				2,257	0			3,120	4,434	70.4	21,659	14.4
1990	2,593	754			14,465	2,088	0		17,058	2,842	3,655	77.8	15,985	17.8
1991	7,021	2,709			11,193	3,931	0		18,214	6,640	8,704	76.3	29,611	22.4
1992	7,097	2,605			13,828	2,777	0		20,925	5,382	7,314	73.6	18,616	28.9
1993	10,141	2,102	0	0	24,077	3,619	19	0	34,237	5,721	7,131	80.2	19,366	29.5
1994	2,816	1,328	0	0	5,436	2,556	18	9	7,757	3,893	5,800	67.1	25,558	15.2
1995	825	522	0	0	15,414	3,024	0	0	15,465	3,546	5,323	66.6	19,006	18.7
1996	12,220	4,021	368	11	17,657	3,902	0	0	18,025	7,934	10,503	75.5	23,043	34.4
1997	9,137	4,858	795	95	16,266	4,026	75	45	17,136	9,024	10,489	86.0	16,603	54.4
1998	10,223	4,272	130	130	17,928	3,753	321	25	22,124	8,180	9,595	85.3	15,617	52.4
1999	14,231	6,785	441	260	14,348	3,686	334	93	17,845	10,824	13,327	81.2	19,766	54.8
2000	16,717	5,698	308	101	27,381	3,692	234	86	34,054	9,577	12,019	79.7	18,062	53.0
2001	15,457	6,544	776	55	25,147	5,479	1,042	661	28,539	12,739	16,673	76.4	23,623	53.9
2002	13,079	5,716	647	618	18,450	5,865	284	119	19,381	12,318	14,862	82.9	22,567	54.6
2003	14,094	4,026	11	0	14,818	3,816	355	182	16,762	8,024	11,282	71.1	17,388	46.1
2004	11,179	4,961	119	91	21,878	6,626	704	493	22,769	12,171	17,122	71.1	28,799	42.3
2005	11,347	6,160	513	104	25,704	4,889	330	153	26,547	11,306	13,802	81.9	24,819	45.6

-continued-

Table 64.–Page 2 of 2.

Year	Northern Cook Inlet Management Area <sup>a</sup>										Southcentral Region		Statewide	
	Knik Arm <sup>b</sup>		Eastside Susitna		Westside Susitna		West Cook Inlet		Total					
	C <sup>c</sup>	H	C <sup>c</sup>	H	C <sup>c</sup>	H	C <sup>c</sup>	H	C <sup>c</sup>	H	H	% NCIMA	H	% NCIMA
2006	14,754	6,664	312	137	15,685	4,318	799	285	16,867	11,404	13,261	86.0	18,184	62.7
2007	6,013	3,050	2,833	1,355	12,640	3,526	225	225	15,822	8,156	11,062	73.7	17,174	47.5
2008	3,612	1,752	4,750	468	15,776	5,683	229	96	20,755	7,999	9,270	86.3	12,959	61.7
2009	10,213	4,647	1,318	385	14,389	3,368	1,983	88	17,690	8,488	12,919	65.7	18,763	45.2
2010	6,031	3,372	6,935	1,033	15,826	5,283	765	225	23,526	9,913	11,093	89.4	16,353	60.6
2011	7,930	5,963	3,508	2,138	3,787	2,969	37	19	7,332	11,089	11,093	100.0	16,353	67.8
2012	5,742	3,231	3,959	79	9,686	4,505	0	0	13,645	7,815	8,580	91.1	12,999	60.1
2013	11,182	9,338	1,630	1,223	19,753	8,168	243	35	32,808	18,764	24,778	75.7	29,218	64.2
2014	7,941	5,067	919	620	5,578	4,021	1,132	0	15,570	9,708	11,024	88.1	11,024	88.1
2015	9,417	10,097	4,309	371	9,548	6,997	70	0	23,344	17,465	21,930	79.6	25,090	69.6
2016	5,804	5,026	1,698	1,658	6,856	4,364	321	321	14,679	11,369	11,867	95.8	15,112	75.2
Mean														
1977–2016	9,141	3,101	1,512	456	15,315	3,272	397	86	26,153	6,732	8,647	69.6	19,138	35.3
2012–2016	8,017	6,552	2,503	790	10,284	5,611	353	71	21,158	13,024	15,636	86.1	18,689	71.4
2017	3,945	3,369	793	654	5,892	5,039	63	32	10,693	9,094	10,540	86.3	12,636	72.0

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

<sup>a</sup> Prior to 1985, SWHS harvest estimates for northern pike in the Knik Arm drainage area may have been included in the “other” (fish species) category.

<sup>b</sup> No reported catch or harvest from Eastside Susitna or West Cook Inlet management units prior to 1993.

Table 65.—Knik Arm drainage northern pike harvest by fishery and total catch, 1985–2017.

Year	Little Susitna	Knik River <sup>a</sup>	Figure 8 Lake	Cottonwood Creek <sup>b</sup>	Big Lake <sup>c</sup>	Flathorn Lake	Nancy Lake <sup>d</sup>	Other <sup>e</sup>	Harvest total	Catch total
1985	0	0	0	0	0	0	156	0	156	0
1986	0	0	0	0	0	0	458	0	458	0
1987	0	0	0	0	0	0	924	0	924	0
1988	0	0	0	0	0	0	364	0	364	0
1989	0	0	0	0	0	0	863	0	863	0
1990	0	0	0	0	0	0	754	0	754	2,593
1991	0	0	0	0	0	227	2,406	76	2,709	7,021
1992	0	0	0	0	0	427	2,101	77	2,605	7,097
1993	0	0	0	0	0	479	1,438	185	2,102	10,141
1994	0	0	0	0	0	539	789	0	1,328	2,816
1995	29	0	0	0	0	471	0	22	522	825
1996	0	0	0	0	13	1,689	1,943	376	4,021	12,220
1997	0	0	1,354	0	0	2,007	1,340	157	4,858	9,137
1998	42	0	766	0	270	910	2,023	261	4,272	10,223
1999	0	0	0	0	226	602	3,888	2,069	6,785	14,231
2000	21	0	992	0	601	1,402	2,475	207	5,698	16,717
2001	52	0	1369	0	110	1,081	2,824	1108	6,544	15,457
2002	76	0	1258	0	0	2,139	1,773	470	5,716	13,079
2003	0	0	820	0	24	1,246	1,543	393	4,026	14,094
2004	30	0	2,726	0	0	1,665	1,918	287	6,626	11,179
2005	0	0	1,889	0	12	1,843	1,448	968	6,160	11,347
2006	0	0	2,418	0	71	1,825	2,203	147	6,664	14,754
2007	0	0	825	0	236	1,280	1,749	240	4,330	8,658
2008	0	0	466	0	98	444	1,083	105	2,196	8,011
2009	88	0	547	27	923	245	2,621	441	4,647	10,827
2010	0	0	357	0	215	945	2,379	421	4317	12,827
2011	0	0	2,092	0	297	909	712	4,954	8,964	10,320
2012	0	0	1,002	0	20	563	1,551	95	3,231	9,622
2013	21	0	2,783	0	44	1223	4,225	2,265	10,561	12,577
2014	239	0	1,569	0	605	0	5,344	180	5,067	7,937
2015	0	0	165	6,181	25	680	1,046	470	8,567	10,097
2016	44	0	0	452	0	301	4,322	258	5,377	6,105
Mean										
2012–2016	61	0	1,104	1,327	139	553	3,298	654	6,561	9,268
2017	0	0	214	661	8	440	1,140	1,560	4,023	4,673

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: Northern pike grouped with other fish prior to 1985.

<sup>a</sup> Knik River and tributaries including Jim Creek.

<sup>b</sup> Includes Anderson Lake.

<sup>c</sup> Big Lake and drainage streams.

<sup>d</sup> Nancy Lake complex lakes.

<sup>e</sup> Includes lakes and streams.

Table 66.—Westside Susitna River drainage northern pike harvest by fishery, 1977–2017.

Year	Alexander Creek <sup>a</sup>	Deshka River	Peters Creek	Lake Creek	Fish Creek <sup>b</sup>	Trapper Lake	Other streams <sup>c</sup>	Other lakes <sup>c</sup>	Total
1977	0	0		42			0	90	132
1978	0	0		9			0	307	316
1979	0	0		209			0	173	382
1980	0	0		103			0	129	232
1981	0	0		0			0	125	125
1982	0	0		52			0	555	607
1983	0	0		52			105	787	944
1984	0	0	0	50			1,136	635	1,821
1985	17	0		52			156	1,023	1,248
1986	514	0		0	491		45	469	1,519
1987	254	0		0	326		0	960	1,540
1988	800	0	0	36	1,455		346	181	2,818
1989	819	0	0	0	676		381	381	2,257
1990	404	0	0	320	370		152	842	2,088
1991	700	0	0	104	921	506	13	1,687	3,931
1992	641	0	0	85	359	410	146	1,136	2,777
1993	1,202	0	0	0	1,080	694	634	9	3,619
1994	1,093	78	0	82	411	558	298	36	2,556
1995	1,067	0	0	125	257	862	422	291	3,024
1996	813	161	0	80	328	1,602	918		3,902
1997	1,607	137	0	29	345	986	922		4,026
1998	1,869	18	0	95	224	876	671		3,753
1999	806	283	0	16	375	499		1,707	3,686
2000	1,037	462	0	127	328		1,738		3,692
2001	2,404	400	0	673	784	388	830		5,479
2002	2,014	226	0	76	461	163	2,054	871	5,865
2003	885	143	0	198	792	255	1,190	352	3,815
2004	1,707	336	0	25	329	202	2,147	448	5,194
2005	925	240	0	124	532	1,659	1,209	200	4,889
2006	588	505	0	344	300	923	1,251	407	4,318
2007	677	277	0	0	964	1,138	145	325	3,526
2008	173	168	0	199	177	4,460	377	129	5,683
2009	1,406	455	0	30	229	791	95	1,109	4,115
2010	655	240	0	20	387	880	631	2,470	5,283
2011	3,494	258	0	94	192	377	2,721	4,287	11,423
2012	10	64	0	82	935	753	767	1,894	4,505
2013	2,581	998	0	1,048	341	764	1,903	533	8,168
2014	823	164	0	118	116	1,262	463	1,075	4,021
2015	1,722	237	0	545	524	458	2,930	581	6,997
2016	930	45	0	812	1,302	368	421	486	4,364
Mean									
2012–2016	1,213	302	0	521	644	721	1,297	914	5,611
2017	3,302	249	0	0	542	132	748	740	5,713

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: Blank cells indicate no data.

<sup>a</sup> Alexander Creek drainage (Alexander Lake, Sucker Lake).

<sup>b</sup> Fish Lake drainage (Yentna River drainage).

<sup>c</sup> May include harvest from West Cook Inlet waters through 1998.

Table 67.—Number of fish (actual and planned) stocked in Northern Cook Inlet Management Area waters, 2011–2017.

Species and life stage	Site	2011 <sup>a,b</sup>	2012	2013 <sup>c</sup>	2014 <sup>c</sup>	2015	2016	2017	Expiration date <sup>d</sup>
Chinook salmon anadromous smolt	Eklutna Tailrace (Knik River)	122,962	160,347	94,609	395,332	424,923	425,097	422,835	12/31/2019
	Deception Creek	140,266	151,220	149,041	211,812	214,495	69,933	100,724	12/31/2019
	Total	263,228	311,567	243,650	607,144	639,418	495,030	523,559	12/31/2019
Coho salmon anadromous smolt	Eklutna Tailrace (Knik River)	97,087	40,921	132,661	81,760	135,835	138,263	126,736	12/31/2017
Coho salmon landlocked fingerlings	Barley Lake	0	2,077	900	3,900	900	909	994	12/31/2017
	Bear Paw Lake	3,600	4,500	4,500	8,500	4,500	4,515	5,027	12/31/2017
	Carpenter Lake	8,377	38,428	15,000	15,000	17,557	15,010	7,450	12/31/2017
	Christiansen Lake	12,160	31,376	15,200	25,236	12,107	12,100	13,312	12/31/2017
	Diamond Lake	8,800	14,192	11,000	11,000	11,583	11,018	12,764	12/31/2017
	Echo Lake	2,640	2,300	1,645	2,300	2,383	2,301	2,506	12/31/2017
	Johnson Lake	0	1,000	1,039	0	894	1,000	1,118	12/31/2017
	Kalmbach Lake	8,800	25,724	11,000	11,005	11,097	11,010	12,014	12/31/2017
	Klaire Lake	720	934	642	900	894	899	992	12/31/2017
	Loberg (Junction) Lake	0	1,100	785	2,100	1,191	1,101	1,209	12/31/2017
	Lucille Lake	6,400	8,000	8,000	8,000	8,001	8,006	8,803	12/31/2017
	Victor Lake	2,160	2,752	1,928	2,700	2,625	2,699	3,134	12/31/2017
	Willow Lake	2,400	3,000	3,000	3,000	2,991	2,994	3,304	12/31/2017
	Total	56,057	135,383	74,639	93,641	76,723	73,562	72,627	12/31/2017
Chinook salmon landlocked catchables	Finger Lake	0	30,863	26,452	26,422	23,606	26,378	25,850	12/31/2017
	Knik Lake	0	3,486	1,890	2,423	2,089	3,892	3,133	12/31/2017
	Matanuska Lake	0	2,974	0	2,561	2,257	2,834	1,066	12/31/2017
	Memory Lake	0	2,167	0	1,915	3,026	2,724	2,086	12/31/2017
	Total	0	39,490	28,342	33,321	30,978	35,828	32,135	12/31/2017

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Species and life stage	Site	2011 <sup>a,b</sup>	2012	2013 <sup>c</sup>	2014 <sup>c</sup>	2015	2016	2017	Expiration date <sup>d</sup>
Rainbow trout landlocked catchables	Bruce Lake	0	992	1,239	1,000	785	1,014	1,000	1/31/2025
	Canoe Lake	0	2,007	2,005	1,997	1,688	1,491	2,004	1/31/2025
	Coyote	0	300	300	300	300	295	481	1/31/2025
	Echo Lake	0	1,550	1,511	1,605	1,497	1,298	1,350	1/31/2025
	Gate Lake	0	973	500	500	403	500	410	1/31/2025
	Irene Lake	0	1,205	859	2,000	1,563	2,217	1,767	1/31/2025
	Kashwitna	0	3,700	4,956	3,471	3,420	2,536	2,646	1/31/2025
	Kepler/Bradley Lake	1,734	4,989	8,424	6,067	6,313	2,719	6,094	1/31/2025
	Knik Lake	525	5,672	2,303	2,365	1,942	2,254	1,792	1/31/2025
	Knob Lake	0	2,912	3,234	2,520	2,626	2,696	2,310	1/31/2025
	Loberg (Junction) Lake	0	990	3,273	1,697	1,238	1,051	1,360	1/31/2025
	Long Lake (Mile 86 Glenn Hwy.)	0	3,539	4,999	3,898	3,560	4,652	3,770	1/31/2025
	Lucille Lake	0	6,413	8,690	7,574	5,945	4,811	4,588	1/31/2025
	Matanuska Lake	0	5,937	6,071	6,518	4,003	4,315	3,902	1/31/2025
	Meirs Lake	0	1,212	1,252	1,703	1,323	1,237	1,216	1/31/2025
	Memory Lake	0	2,681	2,488	2,442	2,007	2,465	1,977	1/31/2025
	Mile 180 Lake	0	2,822	2,200	2,005	1,601	1,480	1,474	1/31/2025
	North Knob Lake	0	685	750	600	703	905	510	1/31/2025
	Ravine Lake	0	3,468	1,250	2,442	1,498	1,821	1,000	1/31/2025
	Reflections Lake	0	600	600	600	618	300	464	1/31/2025
	Rocky Lake	0	1,385	500	1,217	999	993	1,013	1/31/2025
	Slipper (Eska) Lake	0	1,670	1,531	1,200	1,599	1,172	1,865	1/31/2025
	South Rolly Lake	0	5,315	5,400	5,605	4,783	3,023	2,968	1/31/2025
	Tanaina Lake	0	2,502	2,503	2,571	2,127	1,691	1,681	1/31/2025
	Walby Lake	0	1,500	1,549	1,313	997	1,280	1,233	1/31/2025
	Weiner Lake	0	1,987	2,567	1,748	2,053	2,003	1,497	1/31/2025
	Willow Lake	0	2,381	2,250	2,057	2,113	1,607	1,486	1/31/2025
	Total	2,259	69,387	73,204	67,015	57,704	51,826	51,858	1/31/2025

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Species and life stage	Site	2011 <sup>a,b</sup>	2012	2013 <sup>c</sup>	2014 <sup>c</sup>	2015	2016	2017	Expiration date <sup>d</sup>
Rainbow trout landlocked fingerlings	Barley Lake	0	4,250	3,000	5,000	5,500	3,141	3,420	1/31/2025
	Bear Paw Lake	2,280	5,000	5,922	5,000	5,674	2,938	3,412	1/31/2025
	Bench Lake	1700	0	1,500	0	1,575	0	1,787	1/31/2025
	Benka Lake	7,493	0	7,000	7,000	8,301	6,048	6,300	1/31/2025
	Beverly Lake	4,200	5,200	5,000	5,198	6,214	5,002	5,324	1/31/2025
	Big Beaver Lake	16,236	16,100	15,900	16,100	18,429	13,010	17,549	1/31/2025
	Brockner Lake	2,100	4,250	4,800	4,190	5,500	3,306	3,413	1/31/2025
	Buck (Spider) Lake	0	0	0	0	2,000	2,067	2,000	1/31/2025
	Carpenter Lake	21,653	16,660	22,623	19,600	21,975	13,046	13,620	1/31/2025
	Caswell #3 Lake	3,000	4,250	4,800	5,000	6,500	4,531	4,733	1/31/2025
	Christiansen Lake	18,257	9,860	11,600	10,866	11,601	8,569	9,033	1/31/2025
	Crooked Lake	10,378	0	0	0	0	0	0	1/31/2025
	Crystal Lake	18,115	17,300	17,800	17,295	28,159	12,488	1,832	1/31/2025
	Dawn Lake	2,526	3,000	3,000	3,005	3,583	1,488	2,102	1/31/2025
	Diamond Lake	13,905	15,000	17,973	15,064	14,648	12,873	13,651	1/31/2025
	Echo Lake	5,200	0	1,511	1,605	0	1,298	1,350	1/31/2025
	Farmer Lake	1,100	935	1,900	1,101	4,100	1,615	1,573	1/31/2025
	Finger Lake	33,408	55,315	74,798	56,385	63,739	40,144	39,743	1/31/2025
	Florence Lake	5,700	5,499	5,500	5,509	6,801	3,290	4,611	1/31/2025
	Golden Lake	1,500	3,000	3,013	3,000	4,357	2,133	5,427	1/31/2025
	Goober Lake	0	0	0	0	562	0	738	1/31/2025
	Homestead Lake	1,832	3,200	3,200	3,200	2,734	2,500	2,735	1/31/2025
	Honeybee Lake	6,813	6,800	6,800	6,802	8,130	4,814	5,692	1/31/2025
	Ida Lake	5,100	4,600	5,000	4,582	5,141	4,059	4,319	1/31/2025
	Johnson	0	0	2,000	0	2,364	0	9,150	1/31/2025
	Kalmbach Lake	12,500	12,500	12,500	12,500	13,857	9,990	10,534	1/31/2025
	Kepler/Bradley Lake	2,673	0	0	0	0	0	6,094	1/31/2025
	Knob Lake	2,500	0	0	0	0	0	2,310	1/31/2025
	Lalen Lake	9,200	18,093	10,000	10,200	12,047	6,594	6,825	1/31/2025

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Table 67.—Page 4 of 6.

Species and life stage	Site	2011 <sup>a,b</sup>	2012	2013 <sup>c</sup>	2014 <sup>c</sup>	2015	2016	2017	Expiration date <sup>d</sup>
Rainbow trout landlocked fingerlings (continued)	Little Beaver Lake	4,442	5,400	5,000	5,400	6,000	4,348	4,616	1/31/2025
	Little Lonely Lake	8,703	8,400	8,400	8,404	9,725	1,229	7,141	1/31/2025
	Loberg (Junction) Lake	2970	0	0	0	0	0	1,360	1/31/2025
	Long Lake (K/B)	7,000	5,400	7,000	5,400	8,038	4,410	5,877	1/31/2025
	Long Mile 86	9,051	0	0	36,647	0	0	3,770	1/31/2025
	Loon Lake	14,300	16,000	19,183	16,000	19,104	10,958	11,699	1/31/2025
	Lorraine Lake	12,760	11,220	13,100	29,012	15,429	13,447	14,556	1/31/2025
	Lucille Lake	2,500	0	0	0	0	0	4,588	1/31/2025
	Lynne Lake	11,032	8,000	11,000	8,000	12,919	6,400	6,738	1/31/2025
	Marion Lake	11,380	11,300	11,300	11,300	11,549	9,050	9,589	1/31/2025
	Meirs Lake	0	0	1,252	0	0	1,237	1,216	1/31/2025
	Morvro Lake	0	4,096	0	4,500	0	3,538	0	1/31/2025
	North Friend Lake	7,867	7,225	8,200	8,500	9,514	6,765	7,134	1/31/2025
	North Rolly Lake	12,200	6,500	12,800	6,500	14,339	6,519	6,814	1/31/2025
	Peggy Lake	0	4,080	0	4,800	0	3,100	0	1/31/2025
	Reed Lake	2,000	3,000	3,000	3,000	3,583	996	803	1/31/2025
	Rhein Lake	10,200	11,100	10,900	11,100	10,182	7,102	7,456	1/31/2025
	Ruby Lake	0	0	0	3,000	0	2,021	0	1/31/2025
	Seventeenmile Lake	10,000	13,000	13,000	13,768	12,539	10,479	13,667	1/31/2025
	Seymour Lake	22,300		22,300	22,300	24,977	22,305	24,234	1/31/2025
	Slipper (Eska) Lake	2,500	0	0	0	0	0	1,865	1/31/2025
	South Friend Lake	5,645	6,800	7,800	8,000	9,000	6,358	8,400	1/31/2025
	Tigger Lake	2,570	3,400	2,500	4,000	2,508	2,573	2,638	1/31/2025
	Twin Island Lake	14,596	6,800	5,000	3,180	6,400	4,800	5,044	1/31/2025
	Vera Lake	10,900	11,100	10,900	11,100	12,909	7,138	7,541	1/31/2025
	Visnaw Lake	13,100	13,100	13,100	13,100	15,186	12,008	12,600	1/31/2025
	Walby Lake	2,475	1,500	0	0	0	0	1,233	1/31/2025
	Weiner Lake	2,500	0	0	0	0	0	1,497	1/31/2025
	West Beaver	8,260	8,250	8,000	8,250	10,143	7,057	7,392	1/31/2025

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Table 67.—Page 5 of 6.

Species and life stage	Site	2011 <sup>a,b</sup>	2012	2013 <sup>c</sup>	2014 <sup>c</sup>	2015	2016	2017	Expiration date <sup>d</sup>
Rainbow trout landlocked fingerlings (continued)	West Sunshine Lake	4,500	3,825	4,200	4,500	6,010	3,592	3,681	1/31/2025
	Wishbone Lake	2600	0	2,575	0	0	0	2,376	1/31/2025
	Wolf Lake	9,207	10,000	10,000	10,000	12,897	7,122	8,403	1/31/2025
	"X" Lake	0	5,100	0	6,000	0	4,946	0	1/31/2025
	"Y" Lake	4,000	4,250	5,000	5,000	5,002	4,188	4,312	1/31/2025
	Total	440,927	403,682	462,650	488,963	505,474	338,630	387,517	1/31/2025
Arctic grayling	Canoe Lake	9,000	0	2,004	0	2,075	0	0	12/31/2023
	Finger Lake	18,000	0	4,170	0	3,607	0	0	12/31/2023
	Florence Lake	2,250	0	500	0	600	0	0	12/31/2023
	Ida Lake	8,325	0	1,648	0	1,503	0	0	12/31/2023
	Kepler/Bradley Lake	6,750	0	1,500	0	2,000	0	0	12/31/2023
	Knik Lake	0	0	958	0	1,013	0	0	12/31/2023
	Lorraine Lake	0	0	2,300	0	2,301	0	0	12/31/2023
	Meirs Lake	9,000	0	2,093	0	1,925	0	0	12/31/2023
	Reed Lake	2,250	0	500	0	589	0	0	12/31/2023
	Ravine Lake	0	0	0	0	1,012	0	0	12/31/2023
	Total	55,575	0	15,673	0	16,625	0	0	12/31/2023
Arctic char landlocked catchables	Benka Lake	1,000	0	725	0	995	0	994	12/31/2018
	Carpenter Lake	0	1,448	557	0	0	2,002	0	12/31/2018
	Echo Lake	0	554	470	0	515	472	507	12/31/2018
	Finger Lake	2,631	0	2,200	0	2,023	0	1,226	12/31/2018
	Irene Lake	776	0	1,125	0	500	0	525	12/31/2018
	Johnson Lake	0	305	0	0	0	100	0	12/31/2018
	Long Lake (Mile 86 Glenn Hwy.)	164	2,578	2,893	3,584	2,996	1,757	1,241	12/31/2018

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Table 67.—Page 6 of 6.

Species and life stage	Site	2011 <sup>a,b</sup>	2012	2013 <sup>c</sup>	2014 <sup>c</sup>	2015	2016	2017	Expiration date <sup>d</sup>
Arctic char landlocked catchables (continued)	Lynne Lake	0	859	1,142	738	0	804	0	12/31/2018
	Marion Lake	910	0	1,357	0	608	0	752	12/31/2018
	Matanuska Lake	1,631	437	1,670	908	1,600	140	1,003	12/31/2018
	Memory Lake	0	440	1,964	200	200	197	0	12/31/2018
	Prator Lake	0	0	750	800	147	197	450	12/31/2018
	Rush Lake	0	300	0	0	0	200	0	12/31/2018
	Seventeenmile Lake	951	0	1,465	1,564	1,215	830	619	12/31/2018
	Total	8,063	8,933	16,318	7,794	10,799	6,699	7,317	
Arctic char landlocked fingerlings	Carpenter Lake	0	0	0	0	0	0		12/31/2014
	Finger Lake	5,902	10,783	0	0	0	0	0	12/31/2014
	Irene Lake	0	0	0	0	0	0	0	12/31/2014
	Johnson Lake	0	0	0	0	0	0	0	12/31/2014
	Long Lake (Mile 86 Glenn Hwy.)	34,737	0	0	0	0	0	0	12/31/2014
	Lynne Lake	0					0	0	12/31/2014
	Matanuska Lake	3,068					0	0	12/31/2014
	Seventeenmile Lake	0	0	0	0	0	0	0	12/31/2014
	Total	43,707	20,815	0	0	0	0	0	
Total anadromous stockings		360,315	352,488	376,311	688,904	775,253	633,293	650,295	
Total landlocked stockings		606,588	677,690	670,826	690,734	694,273	506,545	551,454	
Total stockings		966,903	1,030,178	1,047,137	1,379,638	1,475,571	1,139,838	1,201,749	

Source: ADF&G hatchery records.

<sup>a</sup> Size of catchables decreased to subcatchable size due to loss of hot water at Ft. Richardson hatchery.

<sup>b</sup> Catchable Chinook salmon and rainbow trout were not available due to Elmendorf hatchery closure in 2011.

<sup>c</sup> Catchable Arctic grayling were first stocked in 2013.

<sup>d</sup> Expiration date for fish transport permit.

Table 68.—Sport fish effort, catch (C), harvest (H), and percent of catch harvested (%) from stocked lakes in Northern Cook Inlet Management Area, 2017.

SWHS fishing sites	Angler-days <sup>a</sup>	Percent of total effort	Landlocked salmon <sup>b</sup>			Arctic char			Rainbow trout			Arctic grayling			Northern pike			Total		
			Harvest			Harvest			Harvest			Harvest			Harvest			Harvest		
			C	H	%	C	H	%	C	H	%	C	H	%	C	H	%	C	H	%
Benka	121	0.6	0	0	0	101	0	0	0	0	0	0	0	0	0	0	0	101	0	0
Bradley (Kepler Lk complex)	20	0.1	0	0	0	0	0	0	496	0	0	0	0	0	0	0	0	496	0	0
Byers	581	3.0	0	0	0	0	0	0	389	0	0	0	0	0	0	0	0	389	0	0
Canoe (Kepler Lk complex)	234	1.2	0	0	0	0	0	0	372	213	57	0	0	0	0	0	0	372	213	57
Christiansen	506	2.6	650	419	64	0	0	0	414	298	72	0	0	0	0	0	0	1,064	717	67
Crooked	36	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Echo (Kepler Lk complex)	335	1.7	181	136	75	0	0	0	869	412	47	0	0	0	0	0	0	1,050	548	52
Finger	5,337	27.1	4417	1,474	33	283	68	24	3,351	1185	35	0	0	0	0	0	0	8,051	2,727	34
Honeybee	140	0.7	0	0	0	0	0	0	92	0	0	0	0	0	0	0	0	92	0	0
Irene (Kepler Lk complex)	21	0.1	0	0	0	0	0	0	61	61	100	0	0	0	0	0	0	61	61	100
Kepler	2,815	17.1	0	0	0	0	0	0	3,713	938	827	0	0	0	0	0	0	114	943	827
Knik	72	0.4	0	0	0	0	0	0	163	44	27	0	0	0	0	0	0	163	44	27
Knob	131	0.7	0	0	0	0	0	0	467	73	16	0	0	0	0	0	0	467	73	16
Loberg (Junction)	312	1.6	21	0	0	0	0	0	2,192	229	10	0	0	0	0	0	0	2,213	229	10
Long (Kepler Lk complex)	504	2.6	0	0	0	0	0	0	1,095	0	0	0	0	0	0	0	0	1,095	0	0
Long (Mile 86 Glenn Hwy)	440	2.2	0	0	0	139	139	100	758	408	54	179	136	76	0	0	0	1,076	683	63
Lorraine	43	0.2	0	0	0	0	0	0	106	0	0	0	0	0	0	0	0	106	0	0
Lucile	1,624	8.2	272	0	0	0	0	0	659	133	20	0	0	0	0	0	0	931	133	14
Matanuska (Kepler Lk complex)	374	1.9	0	0	0	170	0	0	604	35	6	0	0	0	0	0	0	774	35	5
Meirs (in Palmer)	161	0.8	0	0	0	0	0	0	2,288	137	6	99	0	0	0	0	0	2,387	137	6

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SWHS fishing sites	Angler -days <sup>a</sup>	% of total effort	Landlocked salmon <sup>b</sup>			Arctic char			Rainbow trout			Arctic grayling			Northern pike			Total		
			Harvest			Harvest			Harvest			Harvest			Harvest			Harvest		
			C	H	%	C	H	%	C	H	%	C	H	%	C	H	%	C	H	%
Memory	1,327	6.7	167	43	26	0	0	0	2436	183	8	0	0	0	475	475	100	3,078	701	23
Morvro	21	0.1	0	0	0	0	0	0	142	0	0	0	0	0	0	0	0	142	0	0
North Friend (also Montana Lk)	71	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ravine	144	0.7	0	0	0	0	0	0	551	0	0	0	0	0	0	0	0	551	0	0
Rhein (Nancy Lk Rec system)	112	0.6	0	0	0	0	0	0	275	0	0	0	0	0	0	0	0	275	0	0
Reflections	21	0.1	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	18	0	0
Seventeenmile Seymour (was Herring Lk)	1,294	6.6	0	0	0	111	43	39	1290	0	0	0	0	0	0	0	0	1,401	43	3
South Rolly (Nancy Lk Rec system)	245	1.2	0	0	0	0	0	0	218	0	0	0	0	0	0	0	0	218	0	0
Tigger (Talkeetna Lks)	401	2.0	0	0	0	0	0	0	1736	35	2	0	0	0	50	42	84	1,786	77	4
Visnaw	155	0.8	0	0	0	0	0	0	1402	29	2	0	0	0	0	0	0	1,402	29	2
Walby	316	1.6	0	0	0	0	0	0	508	121	24	0	0	0	0	0	0	508	121	24
Weiner	215	1.1	0	0	0	0	0	0	587	305	52	0	0	0	0	0	0	587	305	52
Willow	307	1.6	0	0	0	0	0	0	961	297	31	136	68	50	0	0	0	1,097	365	33
Wolf	164	0.8	0	0	0	0	0	0	55	55	100	0	0	0	0	0	0	55	55	100
X & Y (Talkeetna Lks)	268	1.4	0	0	0	0	0	0	728	110	15	0	0	0	0	0	0	728	110	15
Total	280	1.4	0	0	0	0	0	0	458	0	0	0	0	0	0	0	0	458	0	0
	19,692	100	5,708	2,072	36	804	250	31	25,855	5,306	21	414	204	49	525	517	98	33,306	8,349	2

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: “C” or “catch” is the number of fish harvested plus the number of fish released; “H” or “harvest” is the number of fish kept.

<sup>a</sup> The number of days fished is not species-specific, but rather is the number of days fished for all species combined (including species not listed on this table).

<sup>b</sup> Stocked Chinook salmon.

Table 69.—Northern Cook Inlet Management Area lake stocking summary for nonanadromous fish, 2017.

Species	Lake	Surface acres	Stocking date	Number stocked	Broodstock <sup>a</sup>	Ploidy	Hatchery <sup>b</sup>	Stocking size (g)	Stocking method <sup>c</sup>
Rainbow trout	Barley	19	7 Jun	3,420	17 Swanson R	3N	WJHSFH	3.0	T/BU
	Bearpaw	45	6 Jun	3,412	17 Swanson R	3N	WJHSFH	3.2	T/BU
	Bench	52	27 Jun	1,787	17 Swanson R	3N	WJHSFH	3.3	T/BU
	Benka	123	6 Jun	6,300	17 Swanson R	3N	WJHSFH	3.0	T/BU
	Big Beaver	161	6 Jun	17,549	17 Swanson R	3N	WJHSFH	3.2	T
	Brocker	44	7 Jun	3,413	17 Swanson R	3N	WJHSFH	3.0	T
	Bruce	27	19 May	1,000	16 Swanson R	3N	WJHSFH	112.0	T
	Buck (Spider)	23	23 Jun	2,000	17 Swanson R	3N	WJHSFH	3.3	T/4W
	Canoe	21	19 May	2,004	16 Swanson R	3N	WJHSFH	112.0	T/BU
	Carpenter	176	7 Jun	13,620	17 Swanson R	3N	WJHSFH	3.0	T
	Caswell #3	33	6 Jun	4,733	17 Swanson R	3N	WJHSFH	3.0	T
	Christiansen	179	12 Jun	9,033	17 Swanson R	3N	WJHSFH	3.3	T
	Coyote	2	17 May	481	16 Swanson R	3N	WJHSFH	151.0	T
	Crystal	132	22 May	1,832	16 Swanson R	3N	WJHSFH	112.0	T
	Dawn	12	5 Jun	2,102	17 Swanson R	3N	WJHSFH	3.0	T/BU
	Diamond	139	5 Jun	13,651	17 Swanson R	3N	WJHSFH	3.0	T
	Echo	23	10 May	1,350	16 Swanson R	2N	WJHSFH	158.0	T
	Farmer	21	7 Jun	1,573	17 Swanson R	3N	WJHSFH	3.0	T/BU
	Finger	362	9 Jun	29,076	17 Swanson R	3N	WJHSFH	2.9	T
			29 Jun	10,667	17 Swanson R	3N	WJHSFH	3.2	T
	Florence	55	8 Jun	4,611	17 Swanson R	3N	WJHSFH	3.6	T/BU
	Gate	9	22 May	410	16 Swanson R	3N	WJHSFH	112.0	T
	Golden	13	12 Jun	5,427	17 Swanson R	3N	WJHSFH	2.9	T
	Homestead	17	5 Jun	2,735	17 Swanson R	3N	WJHSFH	3.0	T/BU
	Honeybee	58	8 Jun	5,692	17 Swanson R	3N	WJHSFH	3.3	T/BU
	Ida	46	8 Jun	4,319	17 Swanson R	3N	WJHSFH	3.3	T/BU
	Irene	18	18 May	1,767	16 Swanson R	3N	WJHSFH	112.0	T/BU
	Johnson	40	8 Jun	1,087	17 Swanson R	3N	WJHSFH	3.3	T
	Kalmbach	125	12 Jun	10,534	17 Swanson R	3N	WJHSFH	3.3	T

-continued-

Table 69.—Part 2 of 6.

Species	Lake	Surface acres	Stocking date	Number stocked	Broodstock <sup>a</sup>	Ploidy	Hatchery <sup>b</sup>	Stocking size (g)	Stocking method <sup>c</sup>
Rainbow trout (cont.)									
	Kashwitna	161	18 May	2,646	16 Swanson R	3N	WJHSFH	112.0	T
	Kepler-Bradley	58	24 Jan	143	13b Swanson R	2N	WJHSFH	1058.0	T
			9 Feb	102	15 Swanson R	2N	WJHSFH	410.0	T
			10 May	2,518	16 Swanson R	2N	WJHSFH	158.0	T
			28 Jun	2,661	16 Swanson R	3N	WJHSFH	137.0	T
			23 Aug	552	16 Swanson R	3N	WJHSFH	215.0	T
			26 Oct	118	15 Swanson R	2N	WJHSFH	1145.0	T
			12 May	1,792	16 Swanson R	3N	WJHSFH	148.0	T
	Knob	52	19 May	2,310	16 Swanson R	3N	WJHSFH	112.0	T
	Lalen	92	6 Jun	6,825	17 Swanson R	3N	WJHSFH	3.2	T
	Little Beaver	44	6 Jun	4,616	17 Swanson R	3N	WJHSFH	3.0	T
	Little Lonely	56	8 Jun	7,141	17 Swanson R	3N	WJHSFH	3.6	T
	Loberg	11	24 Jan	140	13b Swanson R	2N	WJHSFH	1058.0	T
			9 Feb	98	15 Swanson R	2N	WJHSFH	410.0	T
			10 May	1,004	16 Swanson R	2N	WJHSFH	158.0	T
			6 Oct	118	15 Swanson R	2N	WJHSFH	1145.0	T
			9 Jun	5,877	17 Swanson R	3N	WJHSFH	2.9	T/BU
	Long (Mi. 86)	106	23 Jan	140	13b Swanson R	2N	WJHSFH	1058.0	T
			10 Feb	307	15 Swanson R	2N	WJHSFH	410.0	T
			19 May	2,876	16 Swanson R	3N	WJHSFH	112.0	T
			5 Oct	200	15 Swanson R	3N	WJHSFH	1295.0	T
			6 Oct	190	15 Swanson R	2N	WJHSFH	1145.0	T
			6 Oct	57	15 Swanson R	2N	WJHSFH	1295.0	T
	Loon	108	6 Jun	11,699	17 Swanson R	3N	WJHSFH	3.2	T
	Lorraine	132	7 Jun	6,609	17 Swanson R	3N	WJHSFH	3.0	T/4W
			7 Jun	7,947	17 Swanson R	3N	WJHSFH	3.0	T
	Lucille	362	12 May	4,023	16 Swanson R	3N	WJHSFH	148.0	T
			23 Aug	565	16 Swanson R	3N	WJHSFH	215.0	T
	Lynne	70	8 Jun	4,090	17 Swanson R	3N	WJHSFH	3.3	T
			8 Jun	2,648	17 Swanson R	3N	WJHSFH	3.5	T

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Table 69.–Part 3 of 6.

Species	Lake	Surface acres	Stocking date	Number stocked	Broodstock <sup>a</sup>	Ploidy	Hatchery <sup>b</sup>	Stocking size (g)	Stocking method <sup>c</sup>
Rainbow trout (cont.)									
	Marion	113	5 Jun	9,589	17 Swanson R	3N	WJHSFH	3.0	T/BU
	Matanuska	62	10 May	3,538	16 Swanson R	2N	WJHSFH	158.0	T
			23 Aug	364	16 Swanson R	3N	WJHSFH	215.0	T
	Meirs	17	16 May	1,216	16 Swanson R	3N	WJHSFH	151.0	T
	Memory	84	19 May	1,977	16 Swanson R	3N	WJHSFH	112.0	T
	Mile 180	31	18 May	1,474	15 Swanson R	3N	WJHSFH	112.0	T/BU
	North Friend	81	6 Jun	7,134	17 Swanson R	3N	WJHSFH	3.0	T/BU
	North Knob	36	19 May	510	16 Swanson R	3N	WJHSFH	112.0	T/BU
	North Rolly	122	8 Jun	6,814	17 Swanson R	3N	WJHSFH	3.6	T/BU
	Ravine	12	18 May	1,000	16 Swanson R	3N	WJHSFH	112.0	T/BU
	Reed	20	11 May	803	16 Swanson R	3N	WJHSFH	148.0	T/BU
	Reflections	21	16 May	464	16 Swanson R	3N	WJHSFH	151.0	T/BU
	Rhein	84	8 Jun	7,456	17 Swanson R	3N	WJHSFH	3.6	T/BU
	Rocky	59	22 May	1,013	16 Swanson R	3N	WJHSFH	112.0	T
	Seventeenmile	100	6/817	1,403	17 Swanson R	3N	WJHSFH	3.3	T
			14 Jun	12,264	17 Swanson R	3N	WJHSFH	2.9	T
	Seymour	229	6 Jun	24,234	17 Swanson R	3N	WJHSFH	3.2	T
	Slipper	9	17 May	1,865	16 Swanson R	3N	WJHSFH	151.0	T
	South Friend	56	6 Jun	8,400	17 Swanson R	3N	WJHSFH	3.0	T/BU
	South Rolly	108	16 May	2,968	16 Swanson R	3N	WJHSFH	151.0	T
	Tanaina	109	25 May	1,182	16 Swanson R	3N	WJHSFH	112.0	T/BU
			25 May	499	16 Swanson R	3N	WJHSFH	119.0	
	Tigger	19	12 Jun	2,638	17 Swanson R	3N	WJHSFH	3.3	T/BU
	Twin Island	151	7 Jun	5,044	17 Swanson R	3N	WJHSFH	3.0	T/4W
	Vera	111	8 Jun	7,541	17 Swanson R	3N	WJHSFH	3.6	T/BU
	Visnaw	131	6 Jun	12,600	17 Swanson R	3N	WJHSFH	3.2	T
	Walby	54	16 May	1,233	16 Swanson R	3N	WJHSFH	151.0	T
	Weiner	21	19 May	1,497	16 Swanson R	3N	WJHSFH	112.0	T
	West Beaver	103	6 Jun	7,392	17 Swanson R	3N	WJHSFH	3.0	T
	West Sunshine	22	6 Jun	3,681	17 Swanson R	3N	WJHSFH	3.0	T/BU
	Willow	143	18 May	1,486	16 Swanson R	3N	WJHSFH	112.0	T/BU
	Wolf	62	9 Jun	8,403	17 Swanson R	3N	WJHSFH	2.9	T/BU

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Table 69.—Part 4 of 6.

Species	Lake	Surface acres	Stocking date	Number stocked	Broodstock <sup>a</sup>	Ploidy	Hatchery <sup>b</sup>	Stocking size (g)	Stocking method <sup>c</sup>
Rainbow trout (cont.)	"Y"	40	12 Jun	4,312	17 Swanson R	3N	WJHSFH	3.3	T/BU
	Total for 72 lakes			397,591					
	Diploid								
	Fingerling			0					
	Catchables			9,823					
	Total			9,823					
	Triploid								
	Fingerling			343,768					
	Catchables			44,670					
	Total			387,768					
Coho salmon (nonanadromous)	Barley	19	1 Jun	994	16 Ship Creek	3N	WJHSFH	2.93	T/BU
	Bearpaw	45	1 Jun	5,027	16 Ship Creek	3N	WJHSFH	2.93	T
	Carpenter	176	1 Jun	7,450	16 Ship Creek	3N	WJHSFH	2.95	T
			1 Jun	9,685	16 Ship Creek	3N	WJHSFH	2.93	T
	Christiansen	179	2 Jun	13,312	16 Ship Creek	3N	WJHSFH	2.93	T
	Diamond	139	1 Jun	12,764	16 Ship Creek	3N	WJHSFH	2.93	T
	Echo	23	2 Jun	2,506	16 Ship Creek	3N	WJHSFH	2.95	T
	Johnson	40	2 Jun	1,118	16 Ship Creek	3N	WJHSFH	2.95	T
	Kalmbach	125	1 Jun	12,014	16 Ship Creek	3N	WJHSFH	2.93	T
	Klaire	7	2 Jun	992	16 Ship Creek	3N	WJHSFH	2.95	T/BU
	Loberg	11	2 Jun	1,209	16 Ship Creek	3N	WJHSFH	2.95	T
	Lucille	362	2 Jun	8,803	16 Ship Creek	3N	WJHSFH	2.93	T
	Victor	14	2 Jun	3,134	16 Ship Creek	3N	WJHSFH	2.95	T/BU
	Willow	143	2 Jun	3,304	16 Ship Creek	3N	WJHSFH	2.95	T
	Wolf	62	2 Jun	3,371	16 Ship Creek	3N	WJHSFH	2.95	T
	Total for 14 lakes			85,683					
	Triploid								
	Fingerling			85,683					

-continued-

Table 69.–Part 5 of 6.

Species	Lake	Surface acres	Stocking date	Number stocked	Broodstock <sup>a</sup>	Ploidy	Hatchery <sup>b</sup>	Stocking size (g)	Stocking method <sup>c</sup>	
Arctic char	Benka	123	8 May	994	15 Aleknagik L.	3N	WJHSFH	144.0	T	
	Echo	23	9 May	507	15 Aleknagik L.	3N	WJHSFH	144.0	T	
	Finger	362	8 May	1,050	15 Aleknagik L.	3N	WJHSFH	144.0	T	
			25 Oct	27	14 Aleknagik L.	2N	WJHSFH	1089.0	T	
			25 Oct	62	13 Aleknagik L.	2N	WJHSFH	2103.0	T	
			2 Nov	87	15 Aleknagik L.	2N	WJHSFH	246.0	T	
			Irene	18	9 May	525	15 Aleknagik L.	3N	WJHSFH	144.0
	Long (Mile 86)	106	9 May	994	15 Aleknagik L.	3N	WJHSFH	144.0	T	
			2 Nov	200	15 Aleknagik L.	2N	WJHSFH	246.0	T	
			2 Nov	47	14 Aleknagik L.	2N	WJHSFH	1089.0	T	
	Marion	113	9 May	752	15 Aleknagik L.	3N	WJHSFH	144.0	T	
	Matanuska	62	8 May	849	15 Aleknagik L.	3N	WJHSFH	144.0	T	
			9 May	154	15 Aleknagik L.	3N	WJHSFH	144.0	T	
	Prator	98	9 May	450	15 Aleknagik L.	3N	WJHSFH	144.0	T	
	Seventeenmile	100	9 May	619	15 Aleknagik L.	3N	WJHSFH	144.0	T	
	Total for 9 lakes				7,317					
	Diploid									
	Catchable				423					
	Triploid									
	Catchable				6,894					
Arctic grayling	No lakes stocked in 2017									

-continued-

Table 69.–Part 6 of 6.

Species	Lake	Surface acres	Stocking date	Number stocked	Broodstock <sup>a</sup>	Ploidy	Hatchery <sup>b</sup>	Stocking size (g)	Stocking method <sup>c</sup>
Chinook salmon (nonanadromous)	Finger	362	5 Jan	1,449	15 Ship Creek	3N	WJHSFH	211.0	T
			3 Oct	9,972	16 Ship Creek	3N	WJHSFH	140.0	T
			5 Oct	2,788	16 Ship Creek	3N	WJHSFH	122.0	T
			10 Oct	11,641	16 Ship Creek	3N	WJHSFH	110.0	T
	Knik	50	4 Oct	3,133	16 Ship Creek	3N	WJHSFH	122.0	T
	Matanuska	62	3 Oct	1,990	16 Ship Creek	3N	WJHSFH	140.0	T
	Matanuska		4 Oct	1,066	16 Ship Creek	3N	WJHSFH	122.0	T
	Memory	84	10 Oct	2,086	16 Ship Creek	3N	WJHSFH	110.0	T
	Total 4 lakes			34,125					
Grand total	Fingerling			428,781					
	Catchables			95,935					
	Total			524,716					

Source: ADF&G Hatchery records.

<sup>a</sup> Treatment: triploid all female.

<sup>b</sup> WJHSFH is William J. Hernandez Sport Fish Hatchery.

<sup>c</sup> “T” is tank truck; “T/BU” means fish were carried in buckets to lake; “T/4W” means transported by 4-wheeler.

Table 70.—Fish Creek salmon harvests by commercial set gillnet and personal use dip net, 1987–2018.

Year	Commercial gillnet harvest from statistical area 247-50						Personal use dip net harvest					
	Sockeye	Coho	Chum	Pink	Chinook	Total	Sockeye	Coho	Chum	Pink	Chinook	Total
1987	24,090	2,043	403	264	<sup>a</sup>	26,800	2,200					2,200
1988	38,251	11,604	325	591	9	50,780	3,000					3,000
1989	47,925	6,075	4,979	545	4	59,528	5,000					5,000
1990	23,450	5,708	5,308	696	4	35,166	6,500					6,500
1991	10,459	1,630	961	21	<sup>a</sup>	13,071	14,369		549	567		15,485
1992	10,748	1,817	1,289	573	<sup>a</sup>	14,427	19,002		607	678		20,287
1993	47,751	831	990	29	<sup>a</sup>	49,601	37,224	973	503	2,068		40,768
1994	7,528	809	357	141	0	8,835	16,012	1,336	248	632		18,228
1995	19,477	1,999	1,018	72	5	22,571	9,102	2,640	99	290		12,131
1996	35,245	1,802	448	25	0	37,520	17,260	2,414	153	331	37	20,195
1997	13,791	85	31	1	1	13,909	3,277	63	4	53	0	3,397
1998	2,597	548	105	0	0	3,250	4,036	649	29	80	1	4,795
1999			No fishery				1,083	17	0	12	0	1,112
2000			No fishery				6,925	958	29	83	0	7,995
2001			No fishery				463 <sup>b</sup>	13	1	4	1	482
2002			Fishery eliminated by BOF						No fishery			
2003									No fishery			
2004									No fishery			
2005									No fishery			
2006									No fishery			
2007									No fishery			
2008									No fishery			
2009							9,898 <sup>c</sup>	53	33	66	10	10,060
2010							23,705 <sup>d</sup>	3,576	290	1,721	12	29,303
2011							5,236 <sup>e</sup>	905	72	155	2	6,370
2012									No fishery			
2013									No fishery			

-continued-

Table 70.—Page 2 of 2.

Year	Commercial gillnet harvest from statistical area 247-50						Personal use dip net harvest					
	Sockeye	Coho	Chum	Pink	Chinook	Total	Sockeye	Coho	Chum	Pink	Chinook	Total
2014							5,829 <sup>f</sup>	1,895	227	4,218	0	12,169
2015							19,260 <sup>g</sup>	3,321	329	1,329	0	24,239
2016									No fishery			
2017							4,894 <sup>h</sup>	281	54	273	1	5,503
2018							18,659 <sup>i</sup>	1,779	208	880	5	21,531
Mean												
1987–2018	23,443	2,913	1,351	247	3	27,955	10,588	1,331	198	781	6	12,307

Source: Personal use 1987–1995 data are from Mills (1988–1994–, Howe et al. (1996); Commercial Harvest 1996–2000 data are estimated from returned permits.

<sup>a</sup> Not reported.

<sup>b</sup> Closed by Emergency Order (EO) on 12 July at 11:00 PM (3 days of harvest).

<sup>c</sup> Opened by EO from 1 August at 6:00 AM through 11 August at 11:00 PM.

<sup>d</sup> Opened by EO from 24 July at 6:00 AM through 31 July at 11:00 PM.

<sup>e</sup> Opened by EO from 29 July at 6:00 AM through 31 July at 11:00 PM.

<sup>f</sup> Opened by EO from 25 July at 6:00 AM through 31 July at 11:00 PM.

<sup>g</sup> Opened by EO from 24 July at 6:00 AM through 31 July at 11:00 PM.

<sup>h</sup> Opened by EO at 6:00am July 26 through 11:00pm July 31.

<sup>i</sup> Opened by EO at 6:00am July 24 through 11:00pm July 31.

Table 71.—Eulachon (smelt) personal use harvest from Knik Arm and Westside Susitna River management units, 1985–2017.

Year	Knik Arm Management Unit				Westside Susitna Management Unit						Total
	Marine Fish Creek	Other marine	Fresh water	Sub-total	Alex-ander Creek	Deshka River	Yentna River	Lake Creek	Susitna River	Sub-total	
1985	0	560	0	560	0	0		0	1,680	1,680	2,240
1986	0	3,351	0	3,351	0	7,300		0	0	7,300	10,651
1987	0	0	0	0	0	0		0	9,265	9,265	9,265
1988	0	0	0	0	1,547	0		1,083	6,219	8,849	8,849
1989	0	0	0	0	0	0	0	785	1,539	2,324	2,324
1990	0	0	0	0	707	842	3,368	674	0	5,591	5,591
1991	0	0	0	0	3,774	245	0	0	2,113	6,132	6,132
1992	0	0	0	0	379	0	1,082	0	14,062	15,523	15,523
1993	0	0	0	0	0	2,236	0	0	4,360	6,596	6,596
1994	0	2,292	0	2,292	0	458	3,438	235	5,352	9,483	11,775
1995	0	0	0	0	0	0	1,382	0	3,167	4,549	4,549
1996	0	0	0	0	364	0	364	0	1,455	2,183	2,183
1997	0	0	0	0	0	0	2,703	0	5,812	8,515	8,515
1998	0	0	0	0	0	0	2,050	0	3,745	5,795	5,795
1999	2,708	0	0	2,708	571	6,499	3,038	0	16,923	27,031	29,739
2000	0	2,725	3,406	6,131	7	1,363	2,725	0	1,397	5,492	11,623
2001	0	675	899	1,574	0	0	3,935	0	4,772	8,707	10,281
2002	0	0	0	0	0	2,228	1,061	0	9	3,298	3,298
2003	0	1,214	364	1,578	911	0	0	0	4,554	5,465	7,043
2004	0	0	11	11	0	2,550	2,252	0	7,760	12,562	12,573
2005	0	0	0	0	0	1,979	0	0	1,089	3,068	3,068
2006	0	0	71	71	0	0	0	0	0	0	71
2007	124	0	0	124	0	0	0	0	620	620	744
2008	0	0	0	0	0	1,095	0	0	737	1,832	1,832
2009	0	0	0	0	0	0	0	0	3,520	3,520	3,520
2010	0	0	0	0	0	0	2,510	0	2,133	4,643	4,643
2011	0	0	0	0	0	0	0	0	6,763	6,763	6,763
2012	0	0	0	0	0	0	3,290	0	0	3,290	3,290
2013	0	0	0	0	0	0	80	0	1,624	1,704	1,704
2014	0	0	0	0	0	0	0	0	1,213	1,213	1,213
2015	0	0	0	0	0	0	1,015	0	0	1,015	1,015
2016	0	0	0	0	0	0	0	0	0	0	0
Mean											
1985–2016	89	338	148	575	258	837	1,225	87	3,496	5,750	6,325
2007–2016	12	0	0	12	0	110	690	0	1,661	2,460	2,472
2012–2016	0	0	0	0	0	0	877	0	567	1,444	1,444
2017	0	0	0	0	0	0	0	0	0	0	0

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

Note: Blank cells indicate no data.

Note: Eulachon were grouped with “other fish” prior to 1985.

Table 72.—Beluga River senior personal use dip net fishery summary, 2008–2018.

Year	Permits issued	Permits returned	Number fished	Boat	Shore	Harvest				Total
						Sockeye	Chum	Coho	Pink	
2008	20	20	5	2	3	31	0	35	0	66
2009	11	11	10	4	6	140	0	78	7	225
2010	14	9	5	3	2	47	5	1	0	53
2011	13	12	7	5	2	137	5	17	0	159
2012	7	7	4	2	2	9	0	7	0	16
2013	8	8	5	4	1	30	1	55	2	88
2014	10	10	7	4	3	32	1	12	1	46
2015	8	8	3	0	3	65	0	17	0	82
2016	11	10	9	0	3	52	2	45	2	101
2017	9	6	6	1	5	26	0	36	4	66
2018	10	10	6	1	5	37	0	17	0	54
Mean										
2008–2018						55	1	29	1	87

Source: Permits returned to ADF&G.

Table 73.—Upper Yentna River personal use and subsistence fish wheel salmon harvest, 1996–2018.

Fishery	Year	Number of permits		Salmon harvest (number of fish)						
		Issued	Returned	Chinook	Sockeye	Coho	Pink	Chum	Total	Harvest/permit
Personal use	1996	17	17		242	46	51	115	454	27
	1997	24	21		549	83	10	30	672	28
Subsistence	1998	21	18		495	113	15	30	653	31
	1999	18	16		516	48	13	18	595	33
	2000	19	19		379	92	7	4	482	25
	2001	16	15		545	50	4	10	608	38
	2002	25	22		454	133	31	14	632	25
	2003	19	15		553	67	8	2	630	33
	2004	21	19		441	146	3	36	625	30
	2005	18	17		177	42	25	24	268	15
	2006	22	22		368	175	26	14	583	27
	2007	22	22		367	66	18	17	468	21
	2008	16	16		310	57	7	23	397	25
	2009	17	17		253	14	6	0	273	16
	2010	32	32		642	50	18	38	748	23
	2011	25	25		598	90	21	337	1,046	42
	2012	21	21		279	24	19	21	343	16
	2013	22	19		160	92	32	128	412	19
	2014	20	18		328	84	32	17	460	23
	2015	29	27		578	151	69	47	845	29
	2016	26	25		514	204	37	36	790	30
	2017	26	26		454	185	10	47	696	27
	2018	29	29	16	405	167	8	10	606	21
Mean										
	1996–2018	22	21	16	418	95	20	44	578	26
	2009–2018	25	24	16	421	106	25	68	622	25
	2014–2018	26	25	16	456	158	31	31	680	26

Source: Permits returned to ADF&G.



Table 74.—Tyonek subsistence gillnet salmon harvest, 1980–2017.

Year	Number of permits		Salmon harvest (number of fish)						
	Issued	Returned	Chinook	Sockeye	Coho	Pink	Chum	Other	Total
1980	67	67	1,936	262	0	0	0	NA	2,198
1981	70	70	2,002	269	64	32	15	NA	2,382
1982	69	69	1,590	310	113	4	14	NA	2,031
1983	73	73	2,755	251	78	6	0	NA	3,090
1984	70	70	2,364	310	66	23	3	NA	2,766
1985	176	NA	1,967	163	91	10	0	NA	2,231
1986	101	NA	1,674	198	210	44	45	NA	2,171
1987	64	61	1,689	174	156	25	10	NA	2,055
1988	47	42	1,776	102	283	13	9	NA	2,183
1989	49	47	1,303	89	120	1	0	NA	1,513
1990	42	37	886	75	400	14	23	NA	1,397
1991	57	54	925	20	69	0	0	NA	1,014
1992	57	44	1,170	96	294	24	9	NA	1,594
1993	62	54	1,566	68	88	25	23	NA	1,769
1994	58	49	905	101	122	27	0	NA	1,154
1995	70	55	1,632	54	186	18	0	NA	1,891
1996	73	49	1,615	88	177	9	27	NA	1,917
1997	70	42	1,051	200	241	13	0	NA	1,505
1998	74	49	1,430	251	97	3	2	NA	1,783
1999	77	54	1,620	247	175	20	66	NA	2,127
2000	60	47	1,461	78	103	0	8	NA	1,649
2001	84	58	1,450	254	72	9	6	NA	1,790
2002	101	71	1,609	314	162	6	14	1	2,107
2003	87	74	1,384	136	54	12	9	NA	1,595
2004	97	75	1,751	121	168	0	0	2	2,042
2005	78	67	1,183	65	159	2	0	0	1,409
2006	82	55	1,366	32	23	1	0	0	1,422
2007	84	67	1,526	249	164	3	4	0	1,946
2008	94	77	1,492	146	227	11	16	0	1,892
2009	89	69	817	229	320	2	1	0	1,369
2010	105	77	1,116	281	223	3	3	0	1,626
2011	114	63	851	202	34	10	10	0	1,107
2012	89	69	1,102	223	174	3	5	NA	1,507
2013	82	48	1,352	278	311	0	32	NA	1,973
2014	92	73	896	487	575	15	5	0	1,978
2015	83	72	1,070	505	568	16	6	NA	2,165
2016	74	64	1,030	188	225	8	12	NA	1,462
Average									
1980–2016	79	60	1,441	192	178	11	10	0	1,833
2007–2016	91	68	1,125	279	282	7	9	0	1,702
2012–2016	84	65	1,090	336	371	8	12	0	1,817
2017	74	47	1,284	457	265	32	6	NA	2,045

Source: ADF&G Division of Subsistence.

Note: NA means not applicable.

Table 75.—Contribution of hatchery fish to the Fish Creek sockeye salmon escapement 2002–2012.

Year	Sample % marked	Weir count
2002	2%	90,482
2003	12%	91,952
2004	17%	22,157
2005	55%	14,215
2006	73%	32,562
2007	71%	27,948
2008	51%	19,339
2009	36%	83,480
2010	67%	126,836
2011	69%	66,678
2012	17%	18,823
Average		
2004–2012	51%	45,782
2008–2012	48%	63,031

Table 76.—Salmon harvests by educational fishery permit holders in Northern Cook Inlet Management Area, 1994–2018.

Educational fishery permit holder	Year	Dates of operation	Salmon harvest (number of fish)					
			Chinook	Coho	Sockeye	Pink	Chum	Total
Knik Tribal Council	1994	ND	ND	ND	ND	ND	ND	29
	1995	ND	5	1	21	0	1	28
	1996	Jun 17–Jul 20	5	45	163	3	62	278
	1997	May 29–Aug 10	19	34	153	0	15	221
	1998	May 14–Aug 15	31	153	186	0	85	455
	1999	May 27–Aug 14	42	120	177	0	55	394
	2000	May 26–Aug 06	65	63	34	0	18	180
	2001	May 13–Aug 10	32	34	71	0	0	137
	2002	May 20–Aug 08	55	99	136	5	36	331
	2003	May 24–Aug 15	34	87	654	3	45	823
	2004	May 15–Aug 06	105	207	142	20	29	503
	2005	May 17–Aug 15	25	80	200	9	16	330
	2006	May 15–Sep 30	24	75	197	12	7	315
	2007	May 15–Sep 30	19	75	7	0	16	117
	2008	May 15–Jul 19	12	70	79	0	0	161
	2009	Jul 01–Sep 30	0	79	66	1	8	154
	2010	Jul 06–24	0	94	72	21	61	248
	2011	Jul 01–Sep 30	0	8	61	1	0	70
	2012	Jul 10–Jul 12	0	6	48	0	4	58
	2013	Jul 29	0	31	26	4	52	113
	2014	Aug 01–Aug 10	0	62	14	0	0	76
	2015	Aug 01–Aug 11	0	15	43	1	21	80
	2016	Jul 10–21	99	22	48	12	17	198
2017	Jul 10–21	0	22	48	12	17	99	
2018	Jul 09–Aug 06	0	50	100	0	12	162	
	Mean							
	1994–2018		24	64	114	4	24	222
	2014–2018		20	34	51	5	13	123
Eklutna Village	1994	ND	ND	7	ND	ND	ND	172
	1995	ND	14	37	55	6	42	154
	1996	ND	ND	ND	ND	ND	ND	ND
	1997	May 01–Sep 30	7	14	39	16	7	83
	1998	May 01–Sep 30	32	116	104	6	51	309
	1999	May 01–Sep 30	11	25	80	3	20	139
	2000	May 01–Sep 30	17	85	76	21	51	250
	2001	May 01–Sep 30	58	95	52	56	34	295
	2002	May 01–Sep 30	58	156	220	40	76	550
	2003	May 01–Sep 30	69	49	160	14	21	313
	2004	May 01–Sep 30	50	297	311	4	71	733
	2005	May 01–Sep 30	72	242	166	8	29	517
	2006	May 01–Sep 30	43	199	59	11	7	319
	2007 <sup>a</sup>	May 01–Sep 30						
	2008	May 01–Sep 32	16	178	19	3	0	216
	2009	Jul 01–Sep 30	0	221	135	20	23	399
	2010	Jul 01–Sep 30	0	162	216	7	30	415
	2011	Jul 01–Sep 30	0	282	343	32	47	704

–continued–

Table 76.–Page 2 of 2.

Educational fishery permit holder	Year	Dates of operation	Salmon harvest (number of fish)					Total
			Chinook	Coho	Sockeye	Pink	Chum	
Eklutna Village (continued)								
	2012	Jul 01–Sep 30	0	242	218	10	63	533
	2013	Jul 01–Sep 30	0	52	124	2	18	196
	2014	Jul 01–Sep 30	0	48	248	13	24	333
	2015	Jul 01–Sep 30	0	41	237	9	48	335
	2016	Jul 01–Sep 30	0	0	2	0	0	0
	2017	Jul 01–Sep 30	0	24	128	9	31	192
	2018	Jul 01–Sep 30	0	48	77	0	11	136
	Mean							
	1994–2018		20	114	140	13	32	316
	2014–2018		0	32	138	6	23	194
Chickaloon								
		Did not fish						
Tyonek Village								
	1998	Aug 12–Aug 14	0	41	11	3	1	56
	1999	Jul 07–Jul 10	0	0	100	0	0	100
	2000	Jul 06–Jul 09	0	0	97	0	0	97
	2008	May 31–Jun 01	2	0	0	0	0	2
	2009	Jun 04–Jun 12	3	0	0	0	0	3
	2010	Jun 21–Jun 23	0	0	1	0	0	1
	2011–2018	No permit - low Chinook salmon abundance						
	Mean							
	1998–2010		1	7	35	1	0	43
Big Lake Cultural Outreach								
	2005	May 15–Sep 30	61	99	98	56	34	348
	2006	Jun 07–Jul 31	8	12	68	1	3	92
	2007	May 15–Sep 30	19	46	7	0	16	88
	2008	Jun 19–Aug 02	20	62	9	0	6	97
	2009	Jul 07–Aug 02	0	70	35	4	1	110
	2010	Jul 22–Aug 11	0	100	94	6	16	216
	2011	Aug 03	0	6	4	3	3	16
	2012	Did not fish	0	0	0	0	0	0
	2013	Jul 27–Aug 07	0	9	21	0	0	30
	2014	Jul 07–24	0	35	7	0	6	48
	2015	Jul 21–24	0	8	25	0	1	34
	2016	Jul 15–27	1	14	19	1	13	48
	2017	Jul 1–Sep 30	2	19	14	13	1	49
	2018	Did not fish						
	Mean							
	2005–2018		9	37	31	6	8	90
McLaughlin								
	2012	Permit terminated to conserve coho salmon						
Intertribal Native Native Leadership								
	2006	May 15-Sep 30	12	95	135	85	21	348

Source: Permit data returned to ADF&G

Note: ND means no attempt was made to collect data; these are not included in the means.

<sup>a</sup> No report.

## **FIGURES**

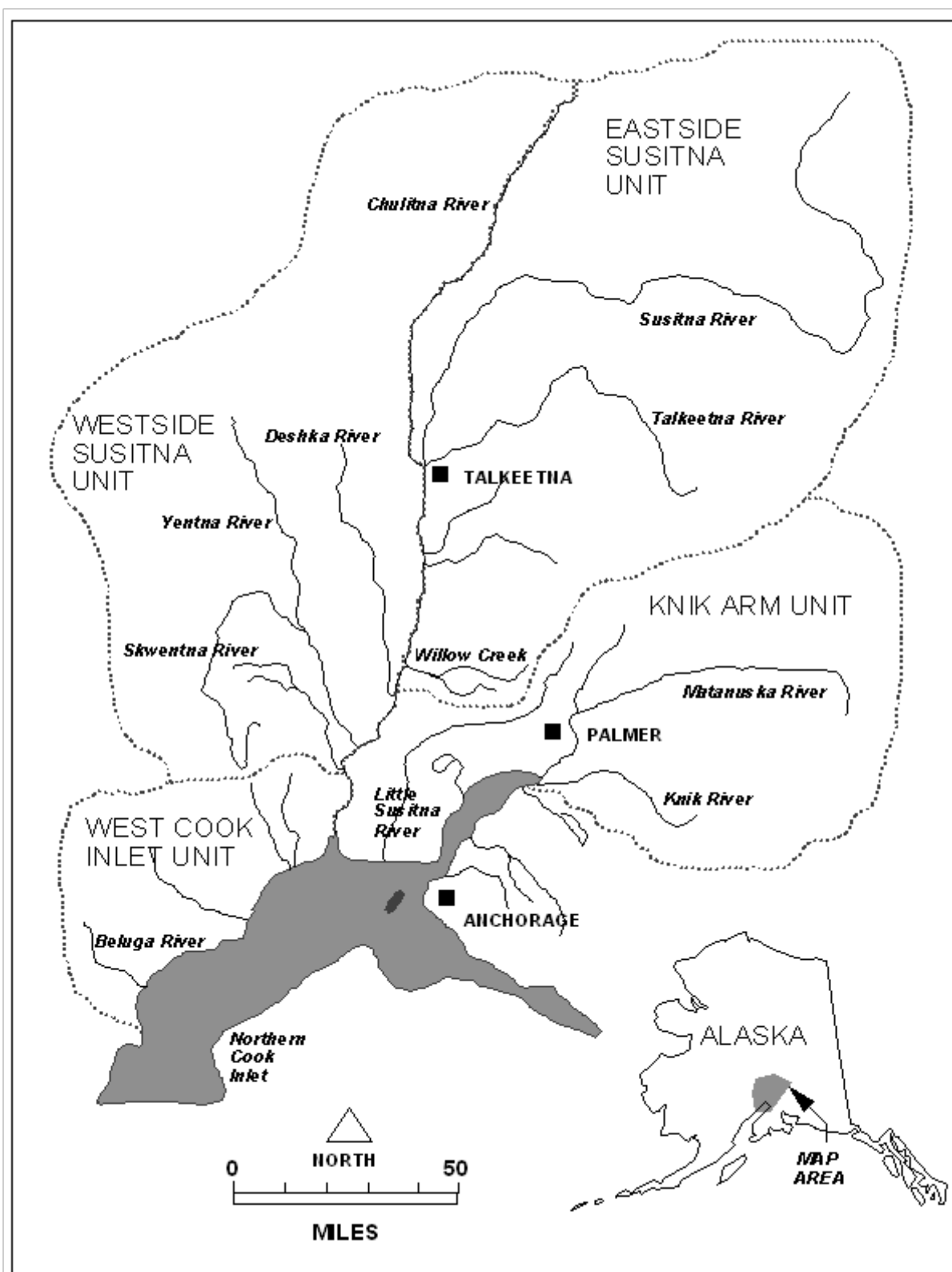


Figure 1.—Northern Cook Inlet sport fish management area (NCIMA).

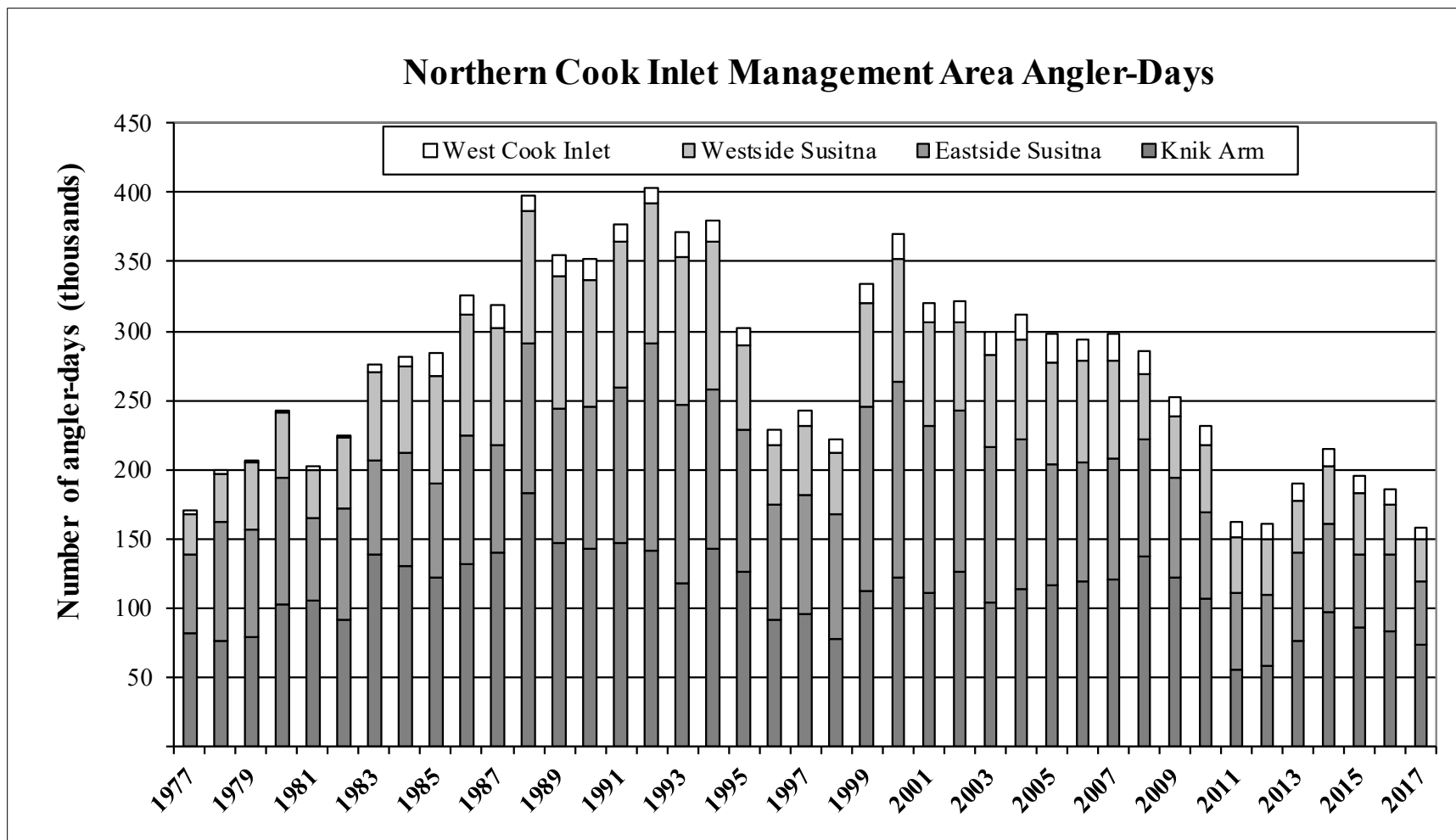


Figure 2.—Angler-days of sport fishing effort expended by recreational anglers fishing Northern Cook Inlet Management Area waters, 1977–2017.

Source: Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

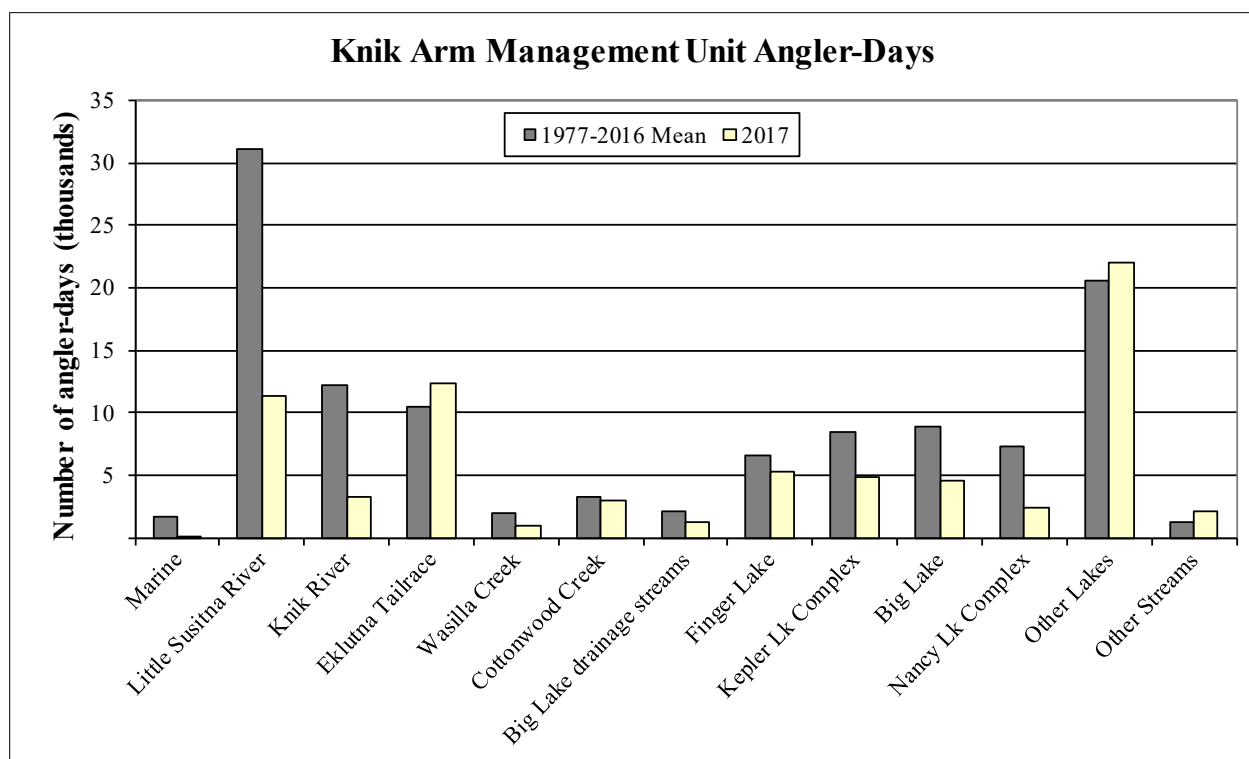


Figure 3.—Comparison of annual sport fishing effort (number of angler-days expended per year) for 2017 versus the mean for 1977–2016 at sites in the Knik Arm Management Unit.

Source: Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.



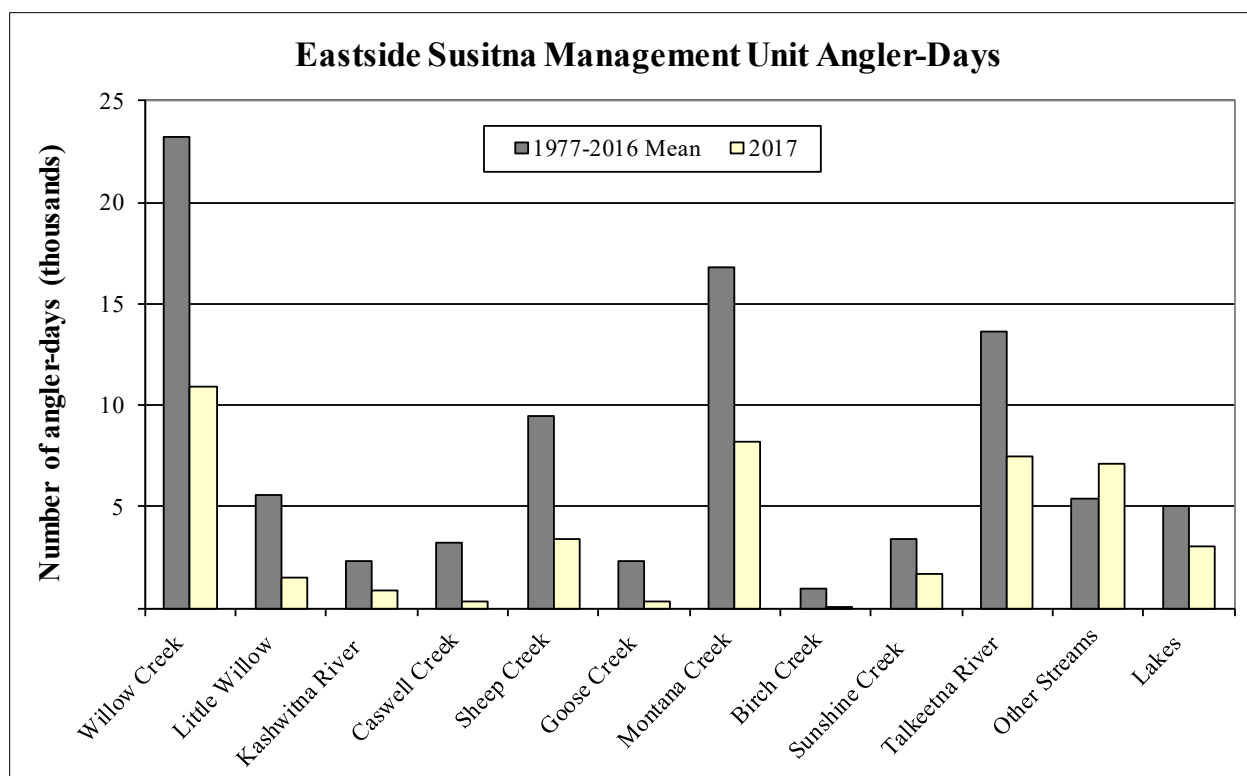


Figure 4.—Comparison of annual sport fishing effort (number of angler-days expended per year) for 2017 versus the mean for 1977–2016 at sites in the Eastside Susitna River Management Unit.

Source: Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

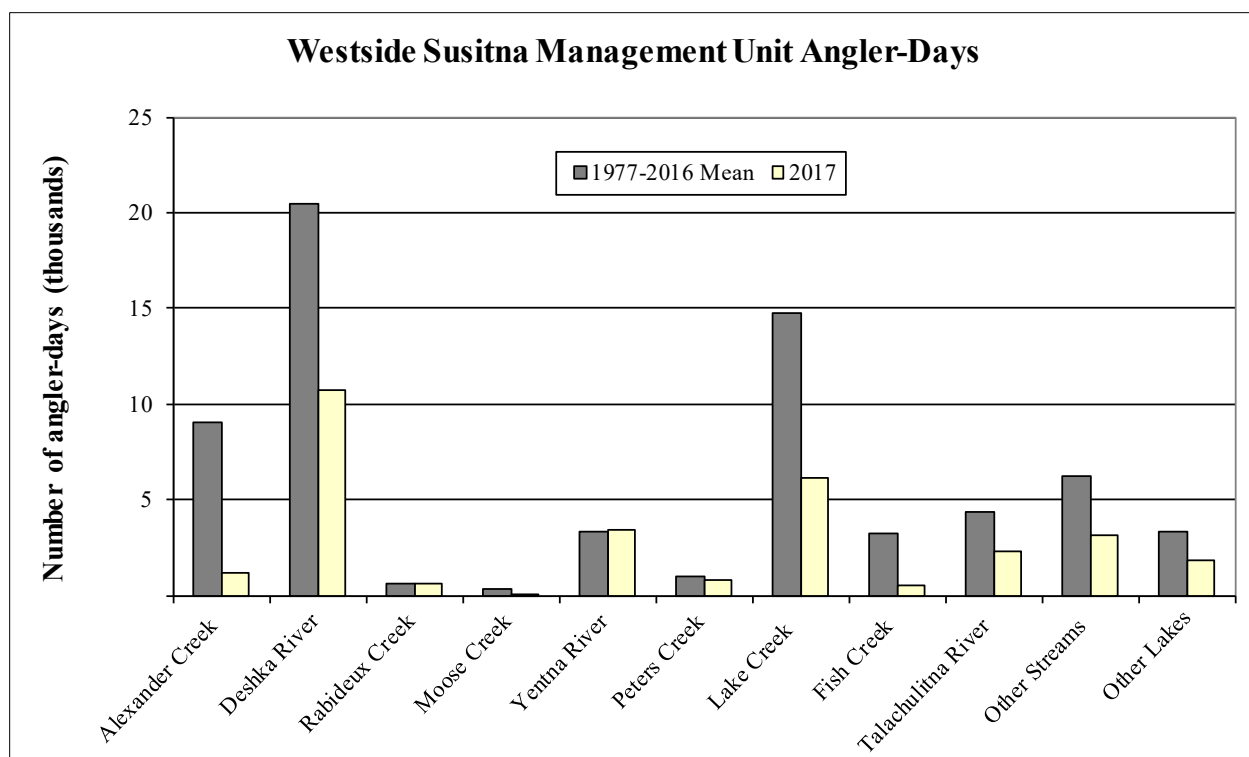


Figure 5.—Comparison of annual sport fishing effort (number of angler-days expended per year) for 2017 versus the mean for 1977–2016 at sites in the Westside Susitna River Management Unit.

Source: Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

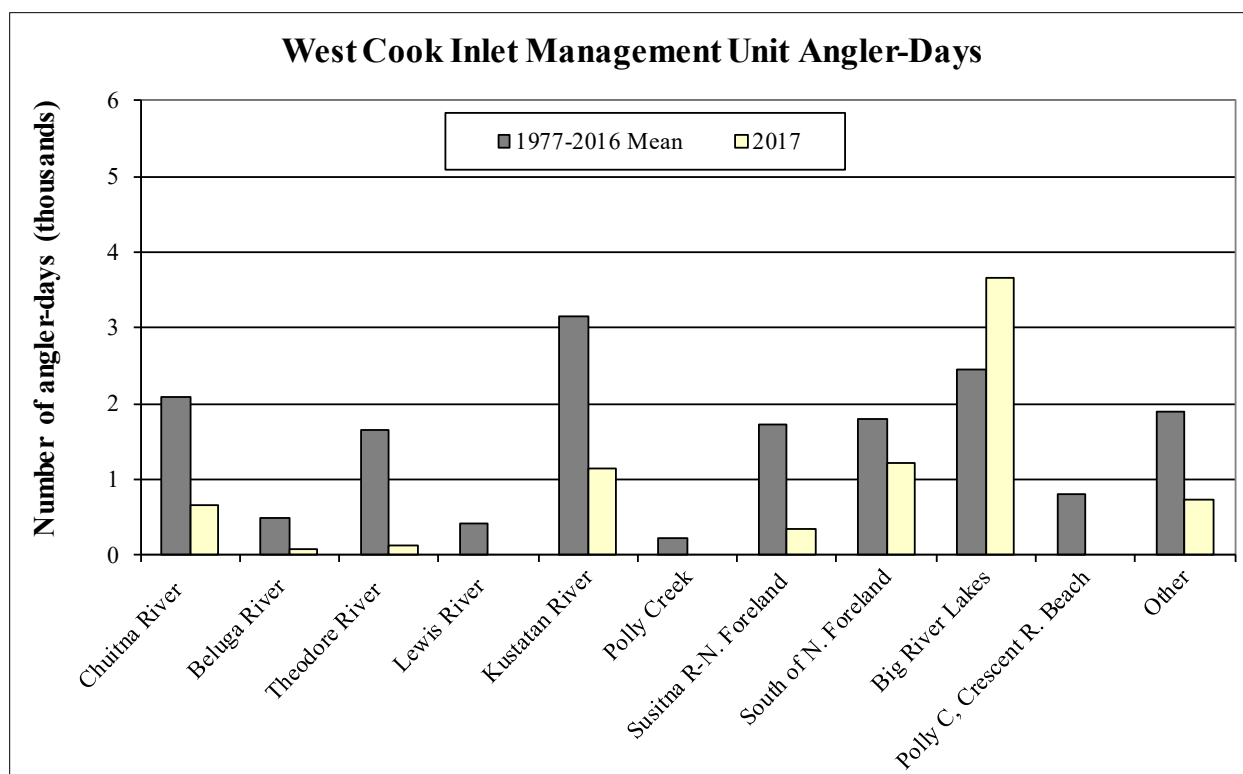


Figure 6.—Comparison of annual sport fishing effort (number of angler-days per year) for 2017 versus the mean for 1977–2016 at sites in West Cook Inlet Management Unit.

*Source:* Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

*Note:* Big River Lakes includes Big River drainage, including Wolverine Creek.

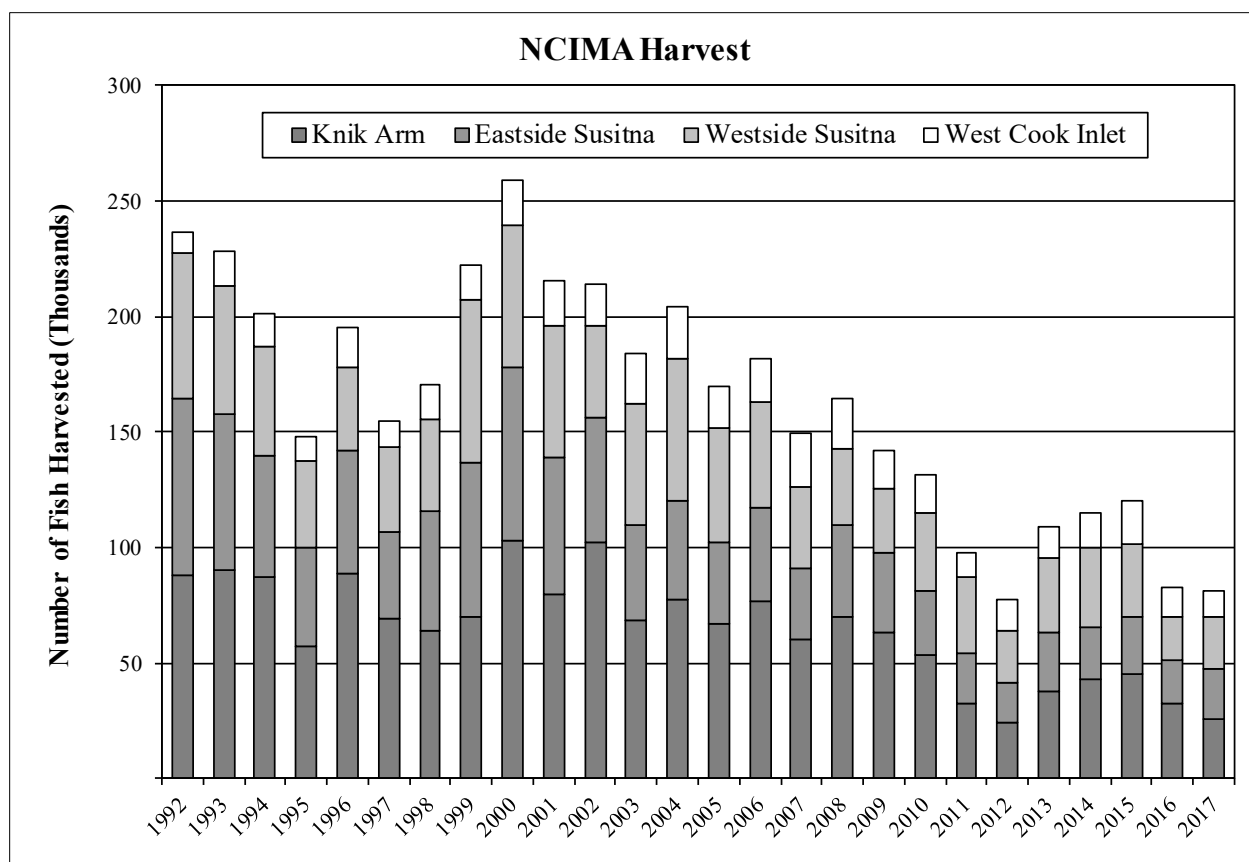


Figure 7.—Northern Cook Inlet Management Area sport fish harvest, 1977–2017.

*Source:* Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

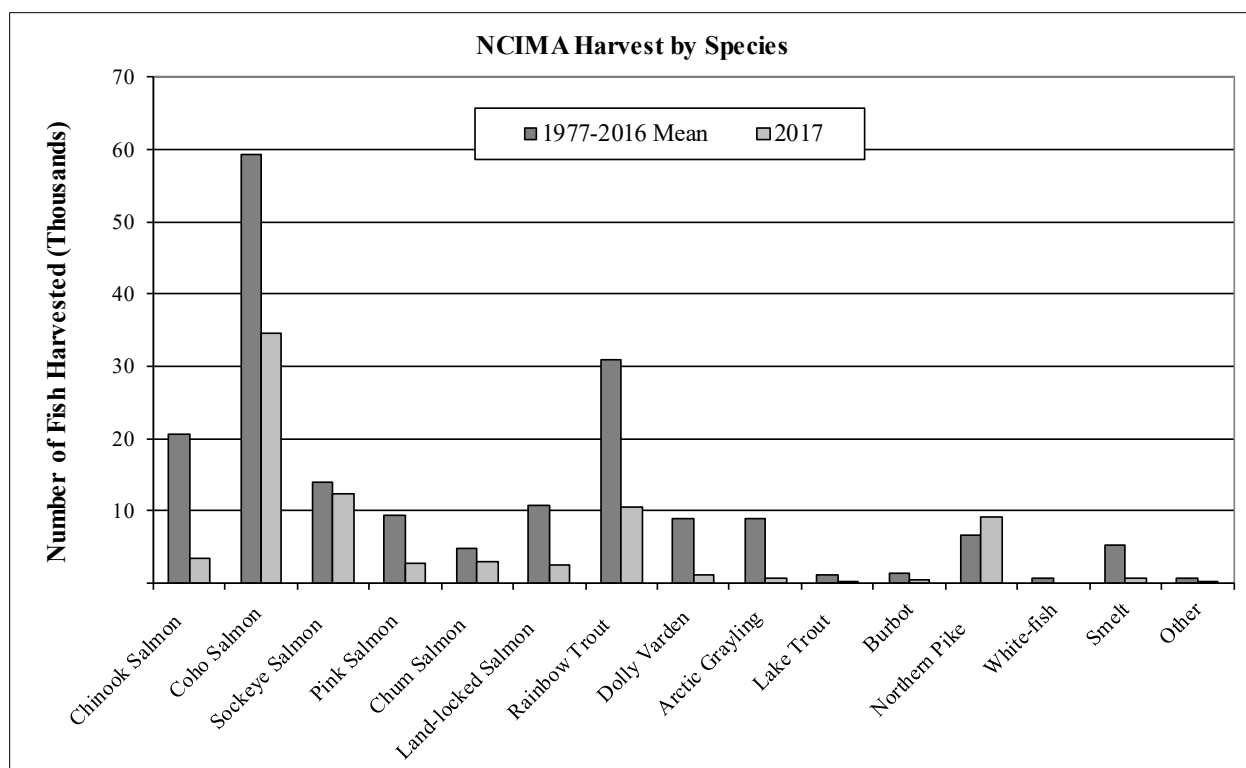


Figure 8.—Northern Cook Inlet Management Area sport harvest by species, comparison of 1977–2016 average harvest versus 2017 harvest.

*Source:* Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

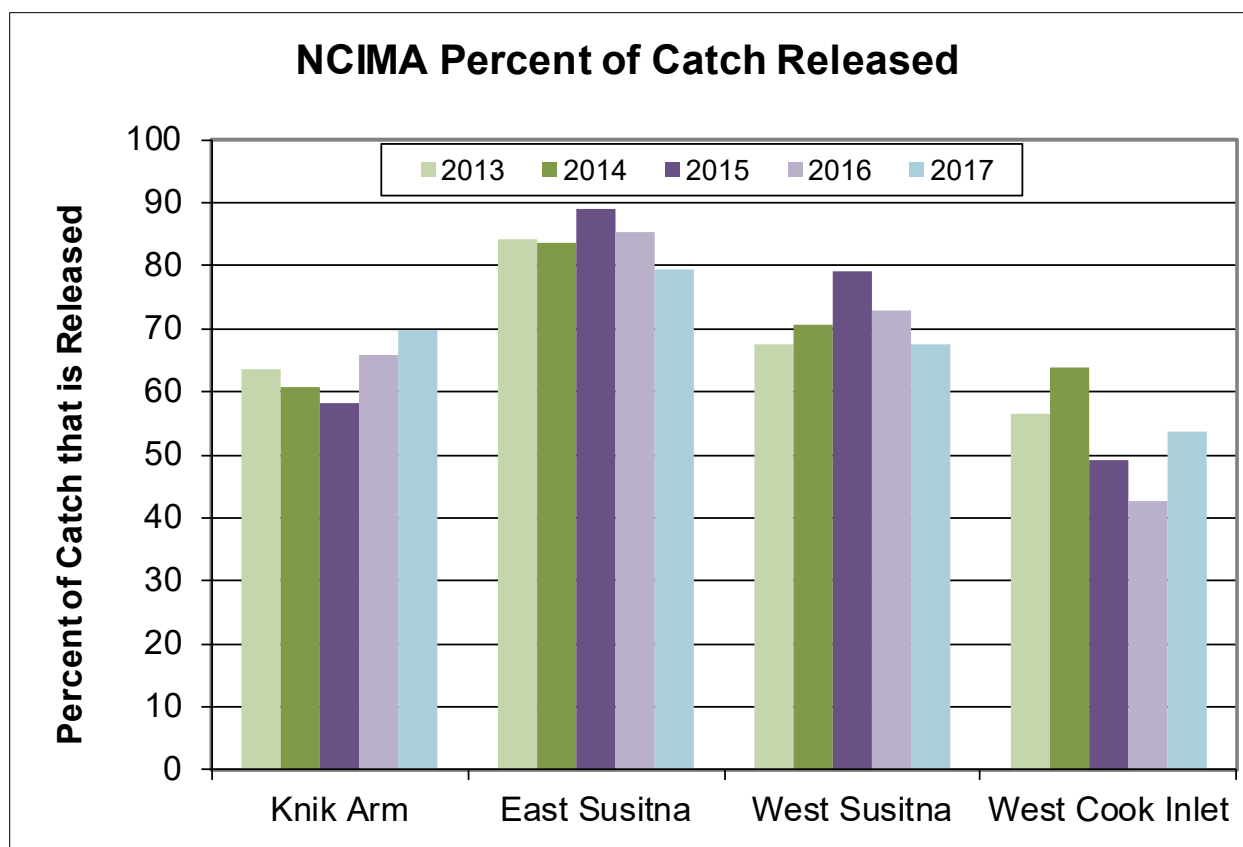


Figure 9.—Percentage of the sport catch of all species from the Northern Cook Inlet Management Area that were released, 2013–2017, by management unit.

*Source:* Mills (1979, 1980, 1981a, 1981b, 1982–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

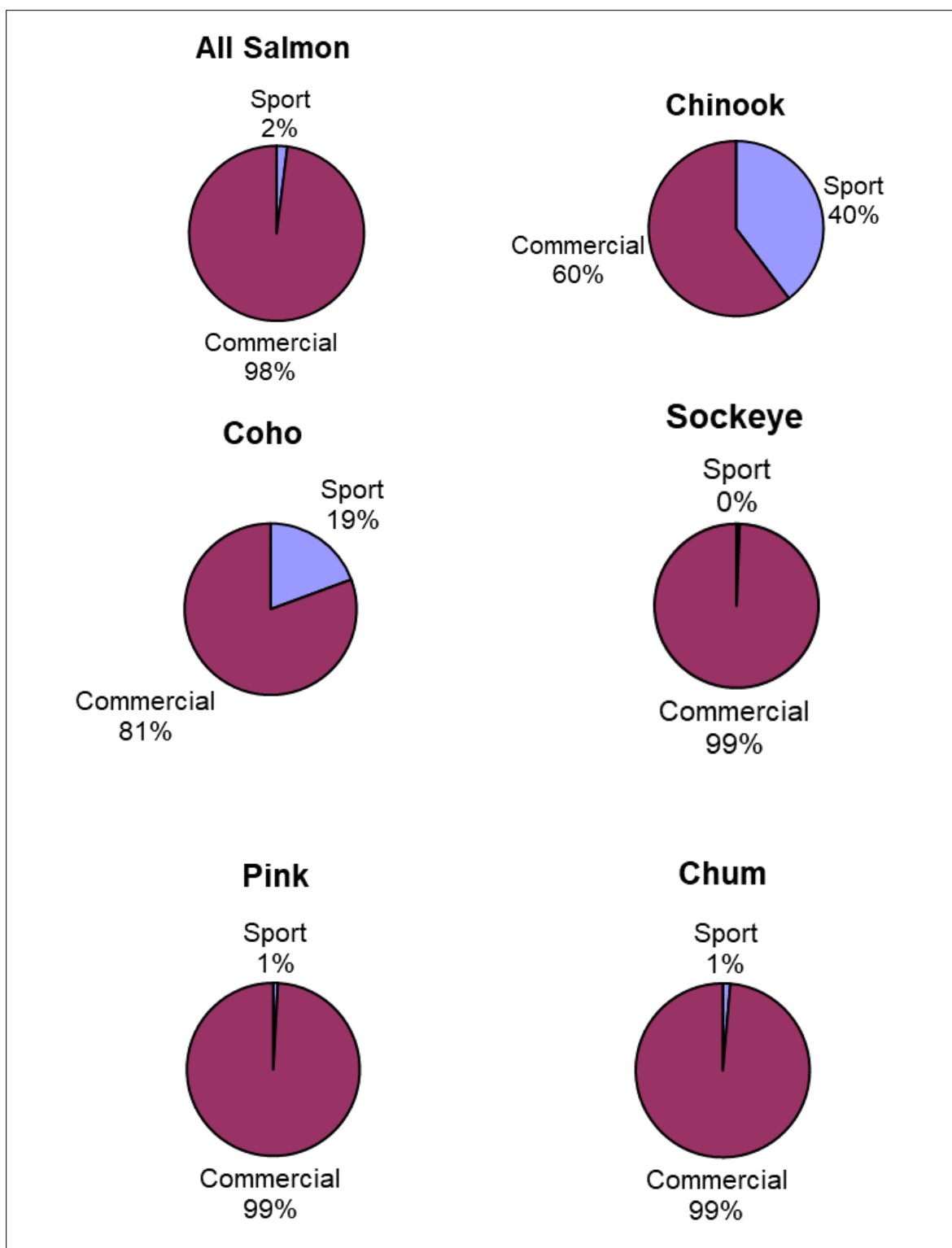


Figure 10.—Composition of the average Northern Cook Inlet salmon harvest, 2012–2016.

*Source:* Commercial from Shields and Dupuis (2016). Sport fish from Mills (1984–1994); Howe et al. (1995, 1996); Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

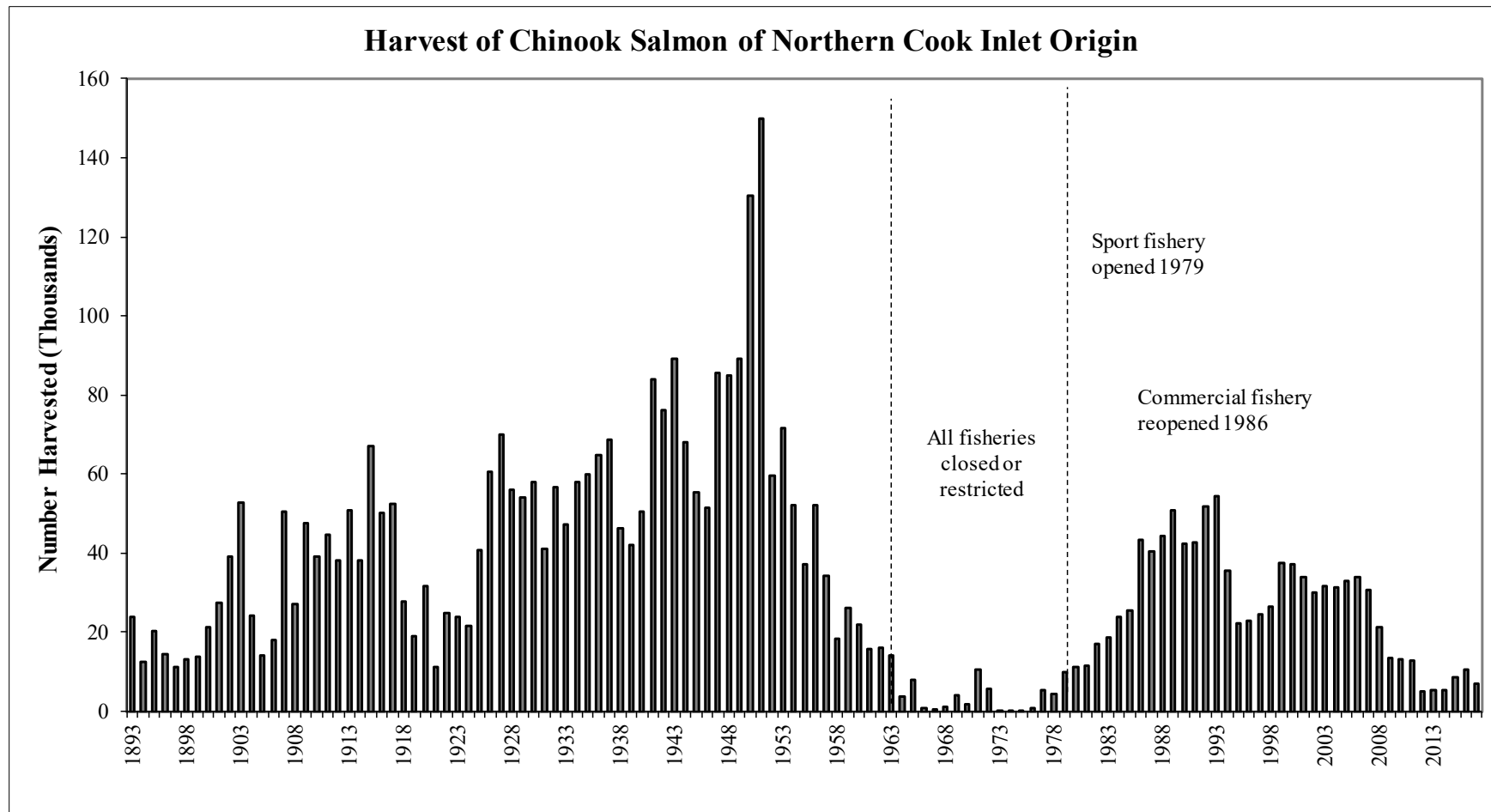


Figure 11.—Estimated harvests of Chinook salmon of Northern Cook Inlet origin by all user groups, 1893–2017.

Source: SWHS for the Division of Sport Fish, data archived with the Division of Commercial Fisheries and the Division of Subsistence.



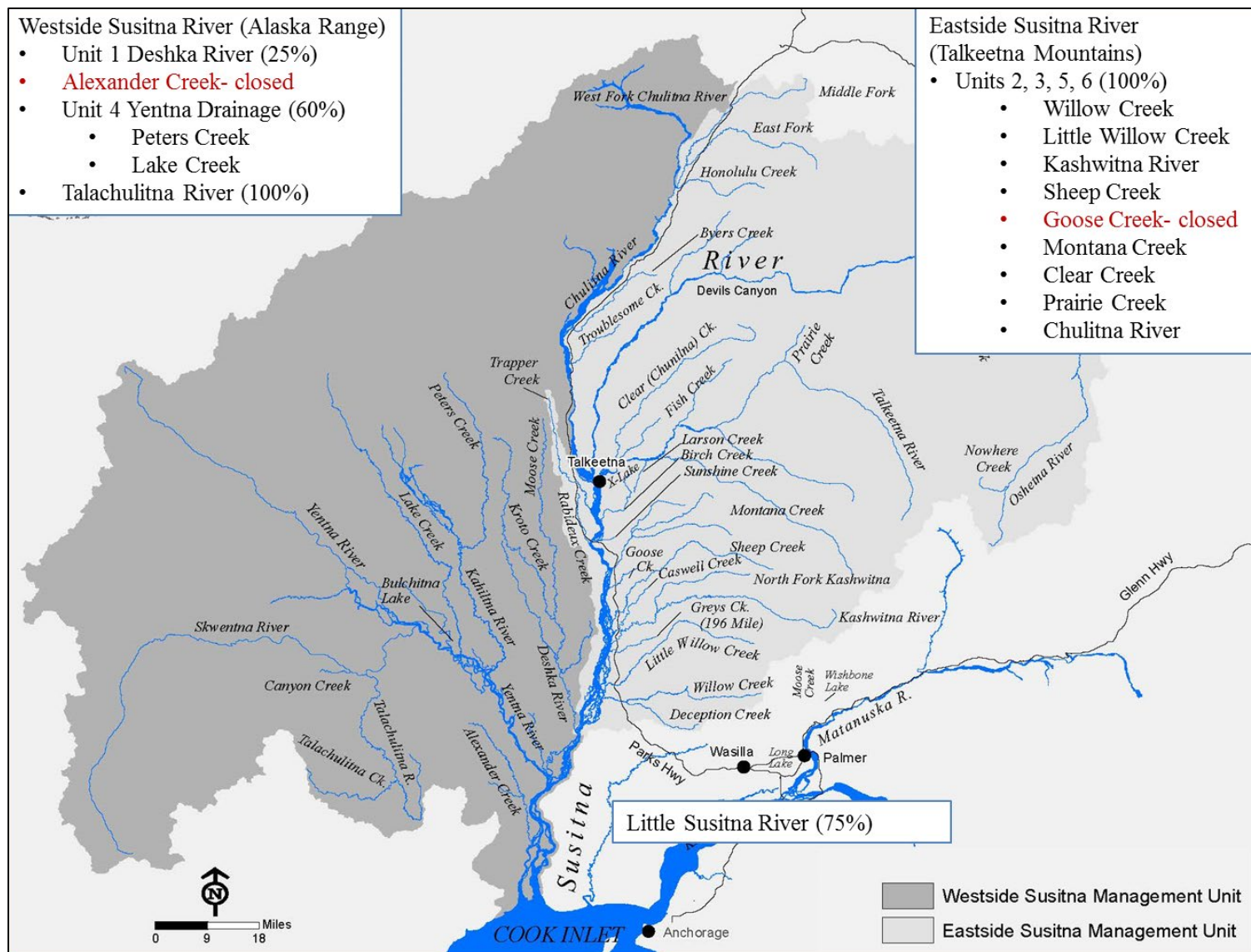


Figure 12.—Approximate Chinook salmon sport harvest targeted reductions by area of the Susitna River and Little Susitna River drainages, 2013–2016.

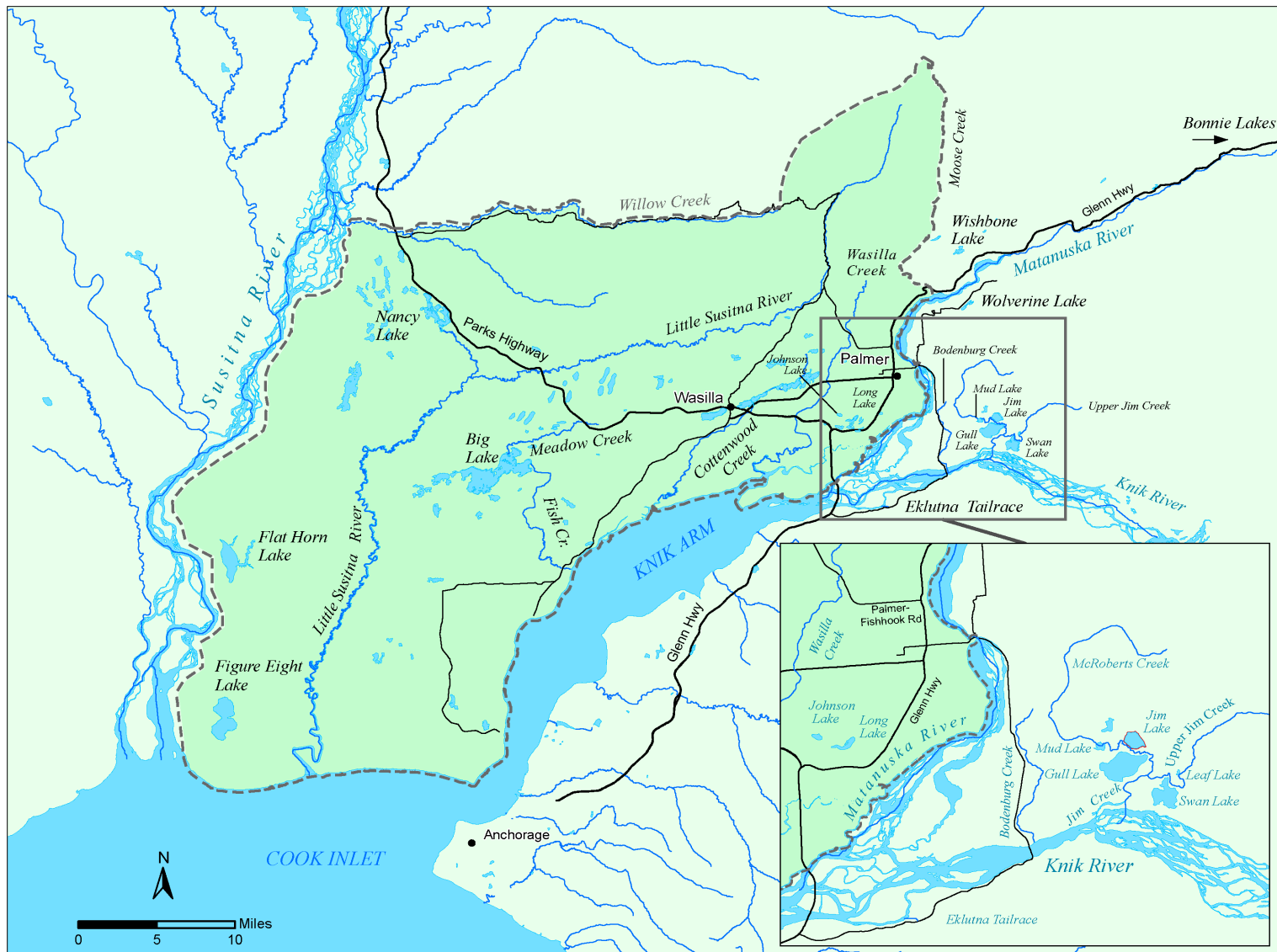


Figure 13.—Map showing the boundary of the Knik Arm Management Unit and the freshwater drainages therein.

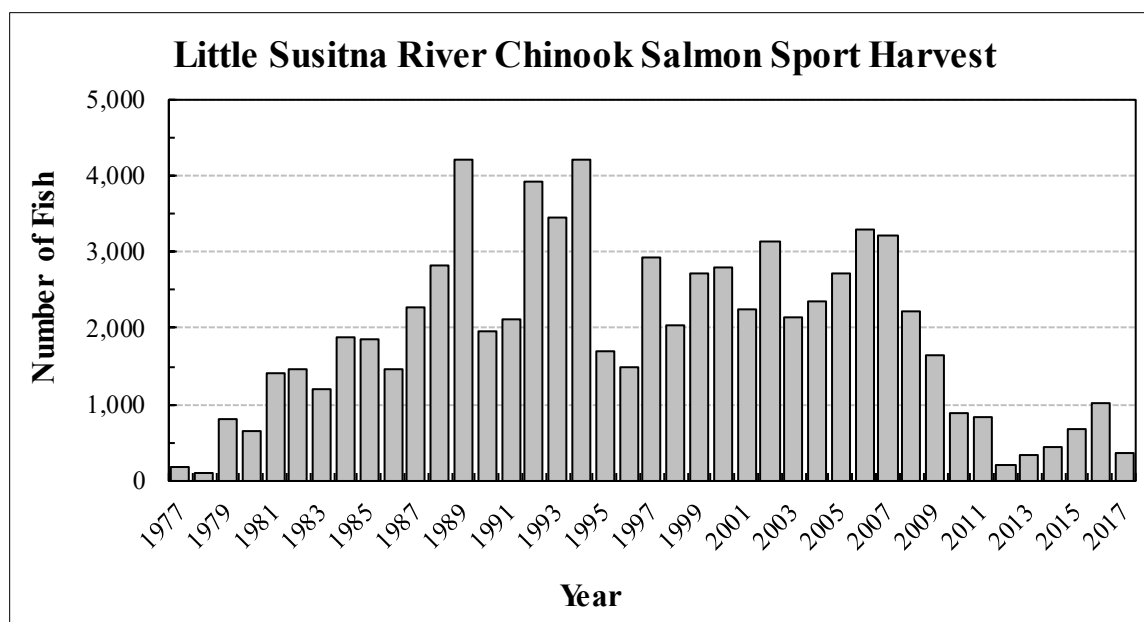


Figure 14.—Sport harvest of Chinook salmon from Little Susitna River, 1977–2017.

Source: Alaska Sport Fishing Survey database [Internet]. 1996–2013. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>

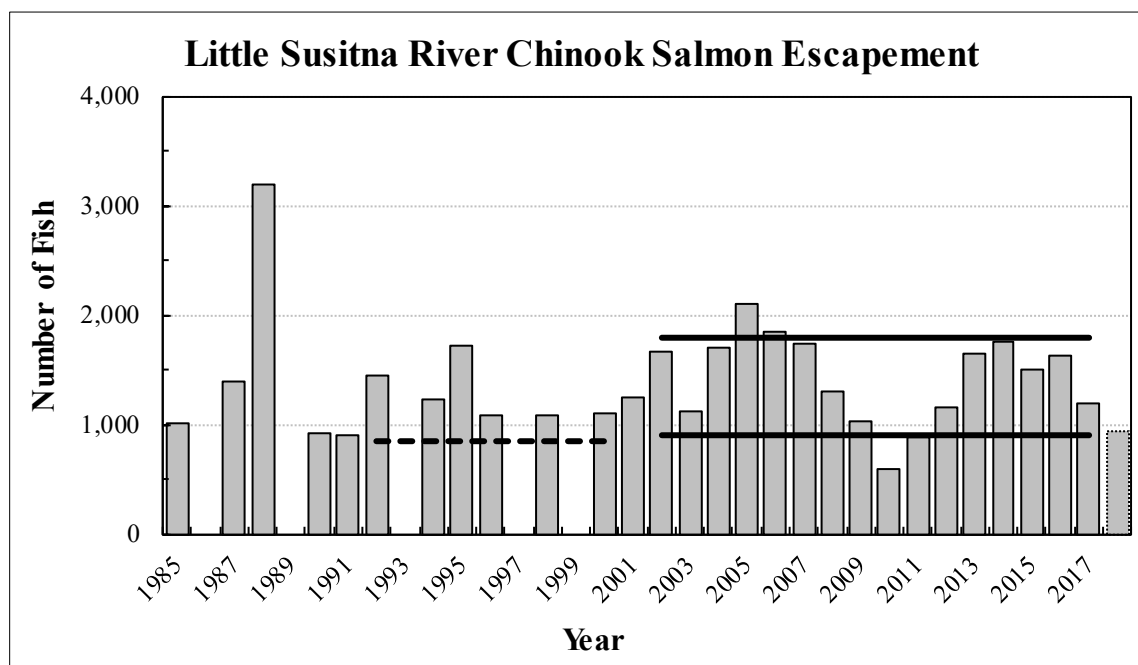


Figure 15.—Estimated escapement of Chinook salmon in the Little Susitna River with current escapement goal range and prior lower bound, 1985–2018.

Source: ADF&G staff aerial surveys.

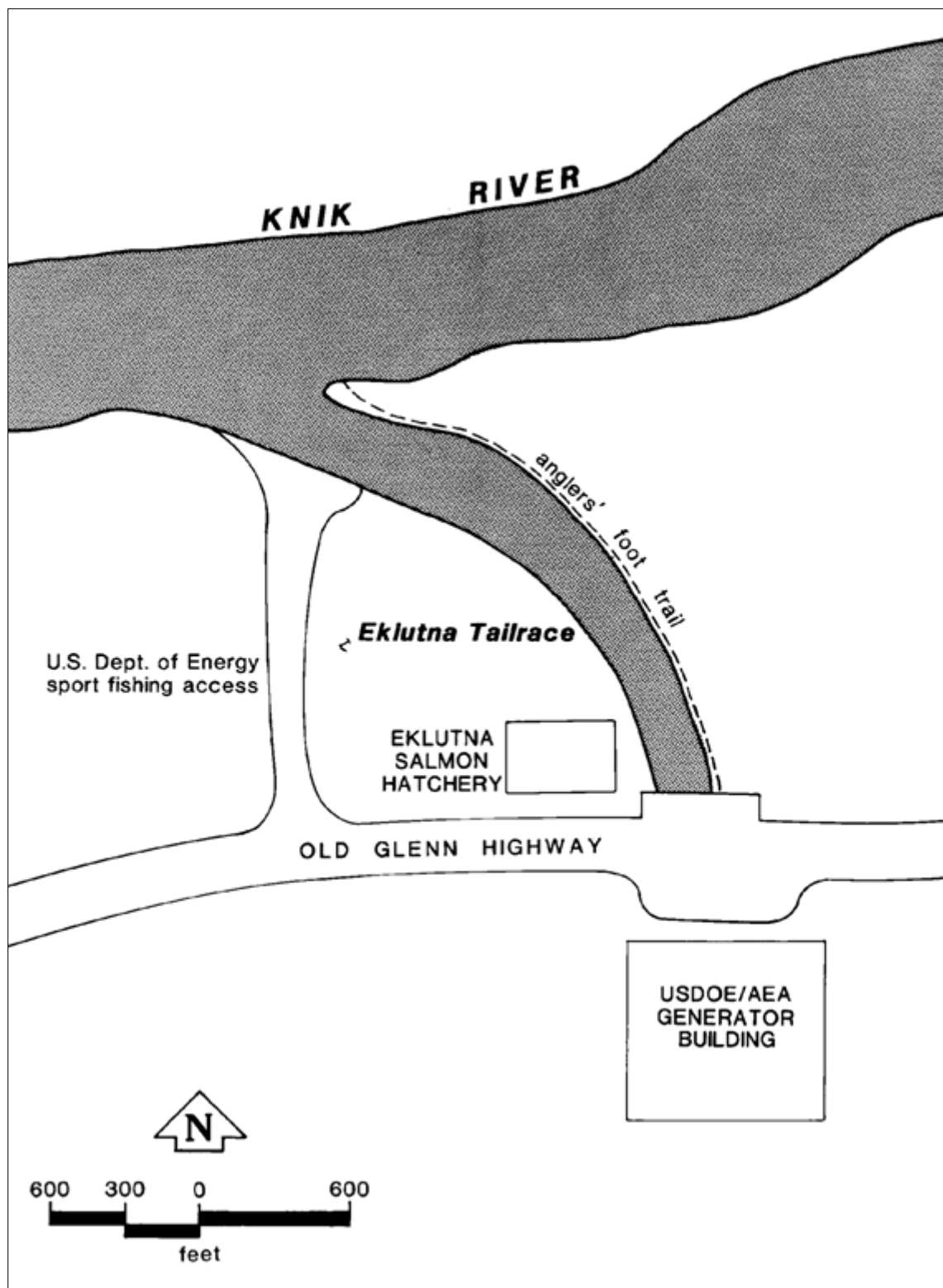


Figure 16.—Eklutna Power Plant tailrace, part of the Knik Arm Management Unit.

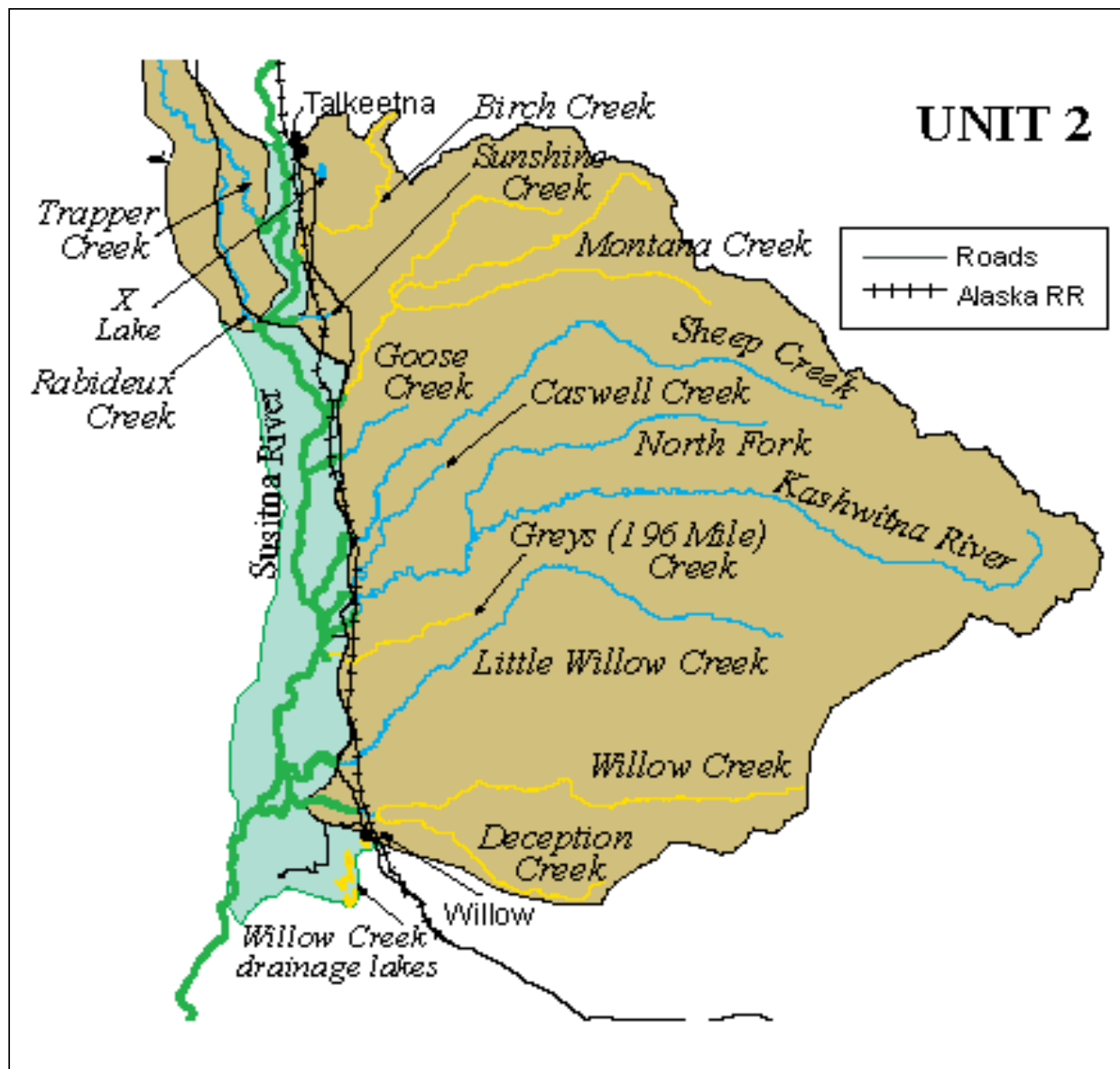


Figure 17.—Susitna River drainage from its confluence with the Deshka River upstream to its confluence with the Talkeetna River.

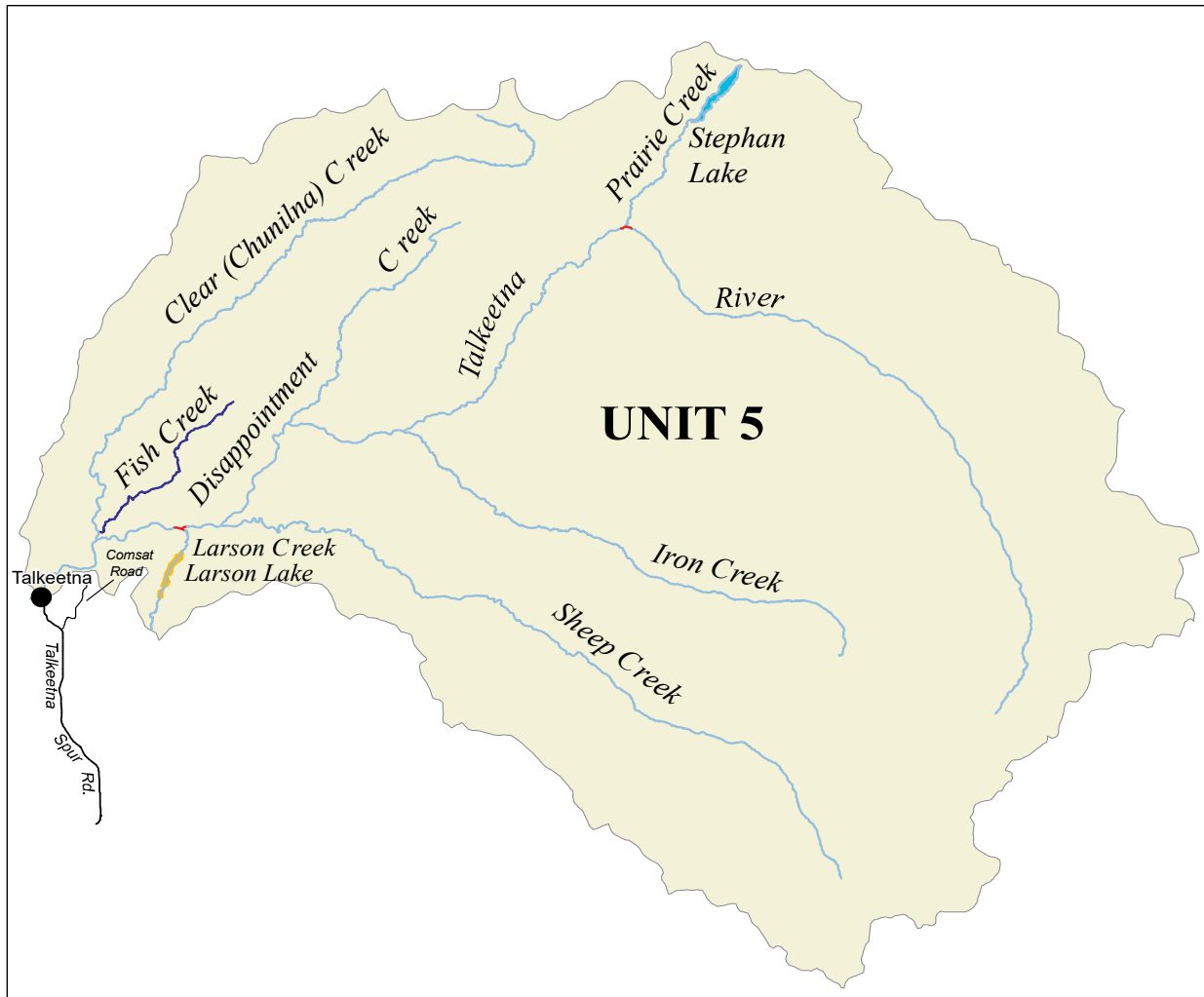


Figure 18.—Flowing waters, lakes, and ponds of the Talkeetna River drainage.

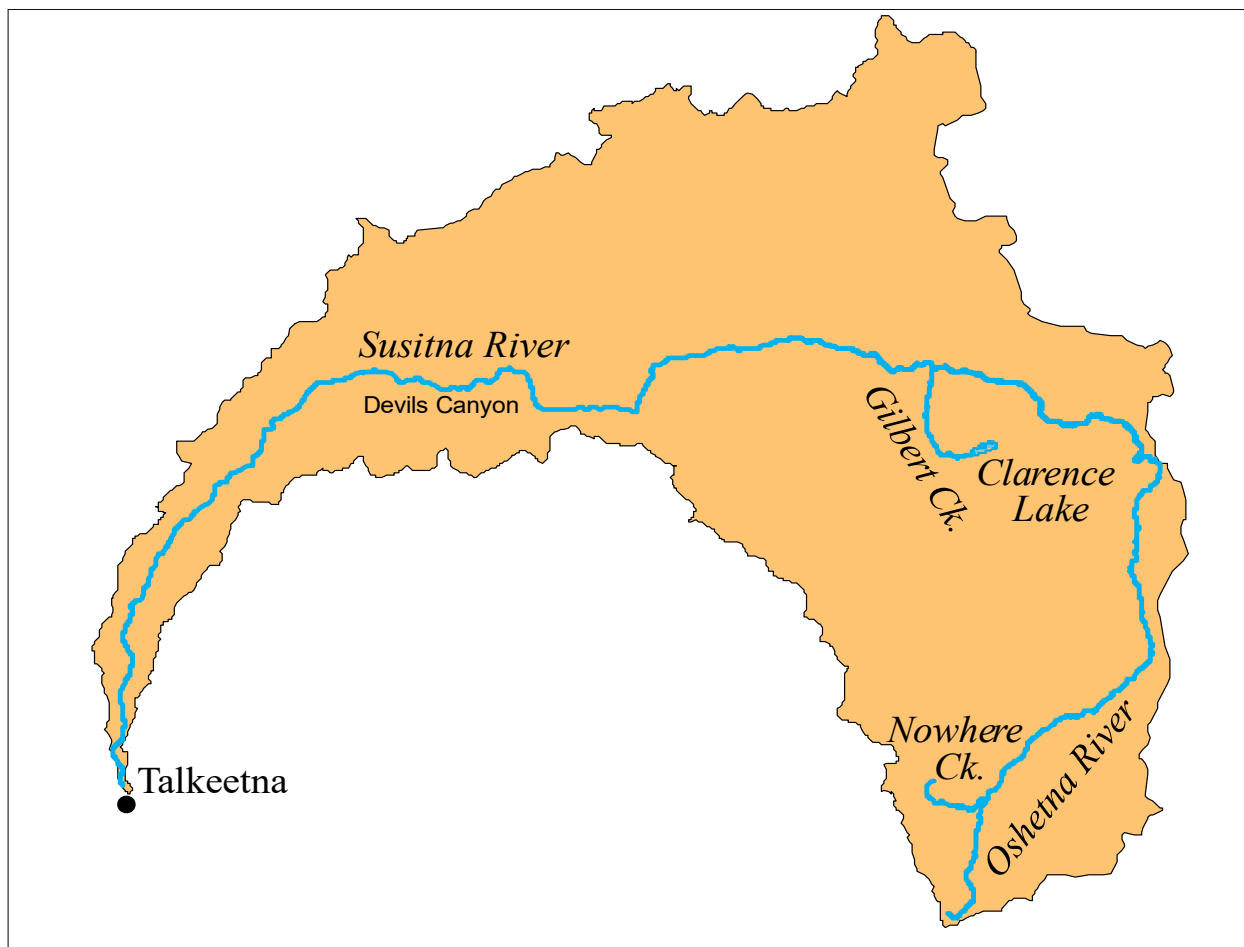


Figure 19.—Upper Susitna River area (Talkeetna to Devils Canyon) including the Oshetna River.

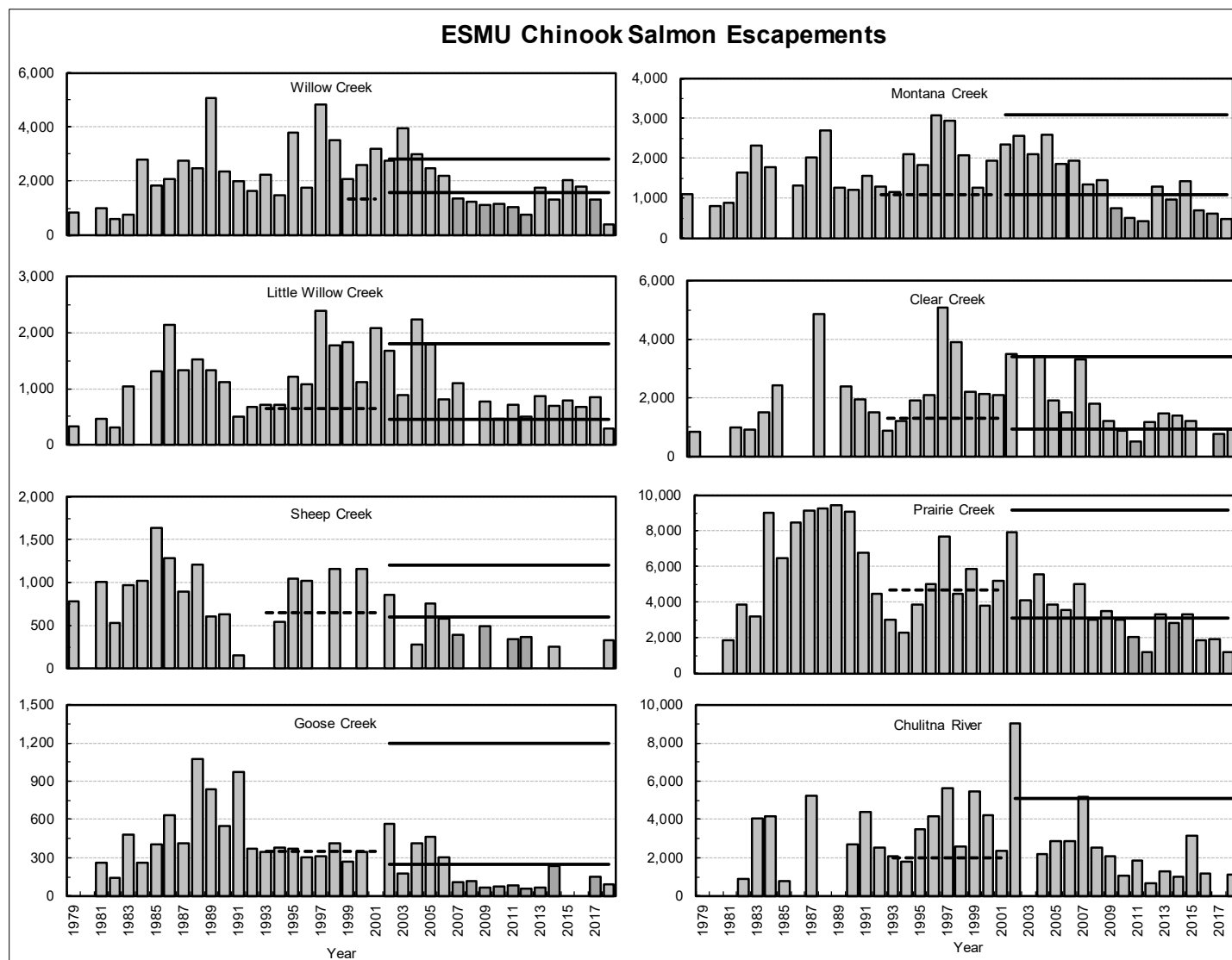


Figure 20.—Chinook salmon escapements at Eastside Susitna River tributaries and Chulitna River, 1979–2018.

Source: ADF&G staff surveys.

Note: y-axes scales differ between sites. The dashed line is the biological escapement goal; solid lines are the sustainable escapement goal range.



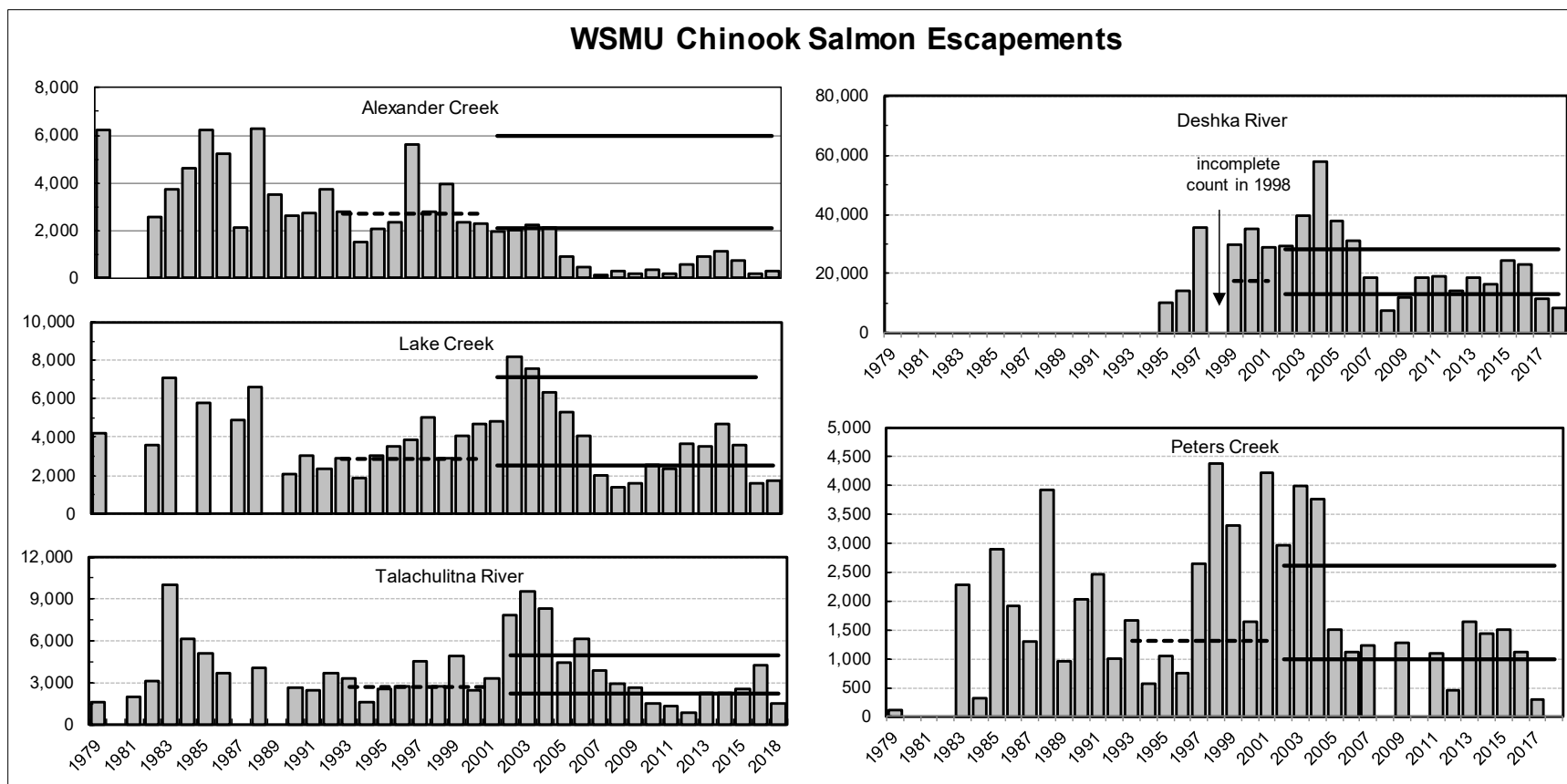


Figure 21.—Chinook salmon escapements at Westside Susitna River tributaries, 1979–2018.

Source: ADF&G staff surveys.

Note: y-axes scales differ between sites. The dashed line is the biological escapement goal; solid lines are the sustainable escapement goal range.

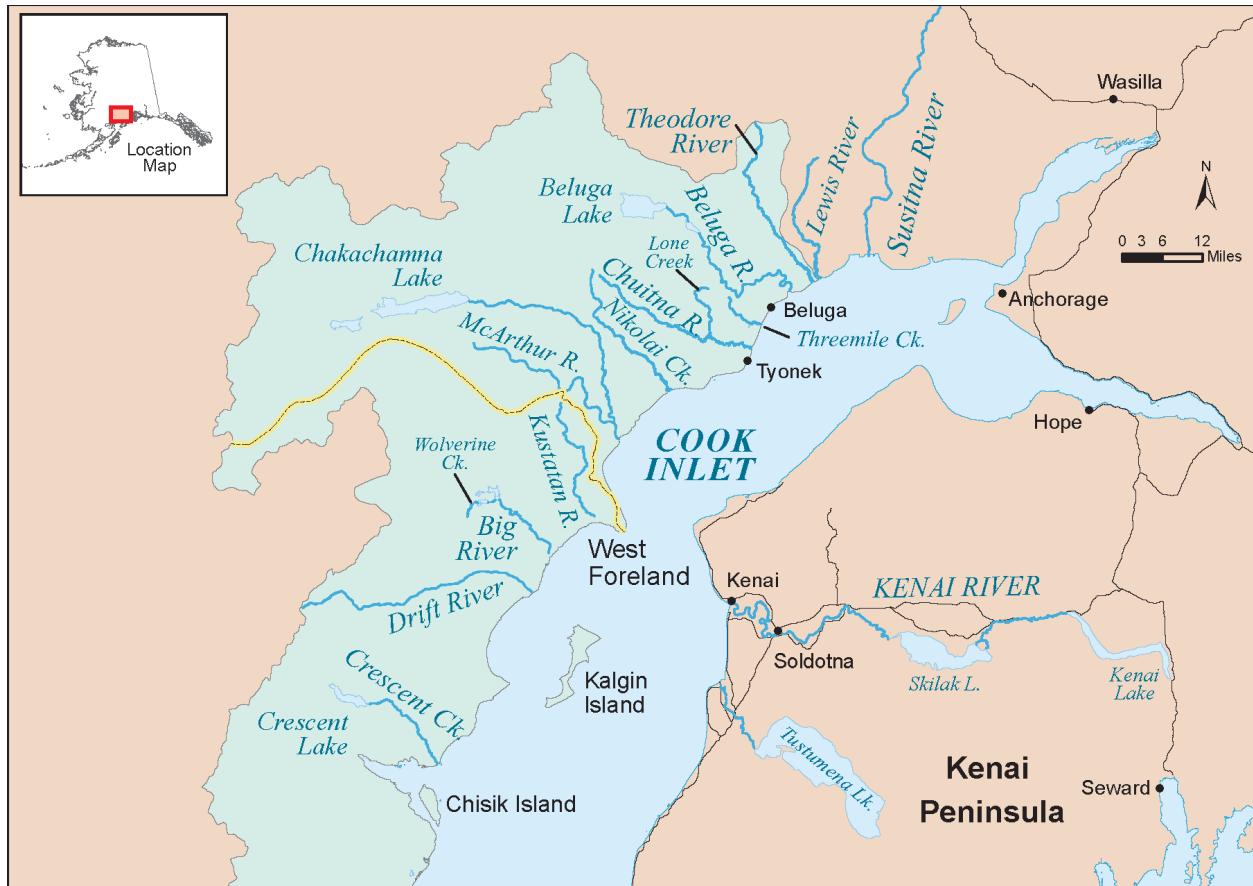


Figure 22.—West Cook Inlet Management Unit (WCIMU).

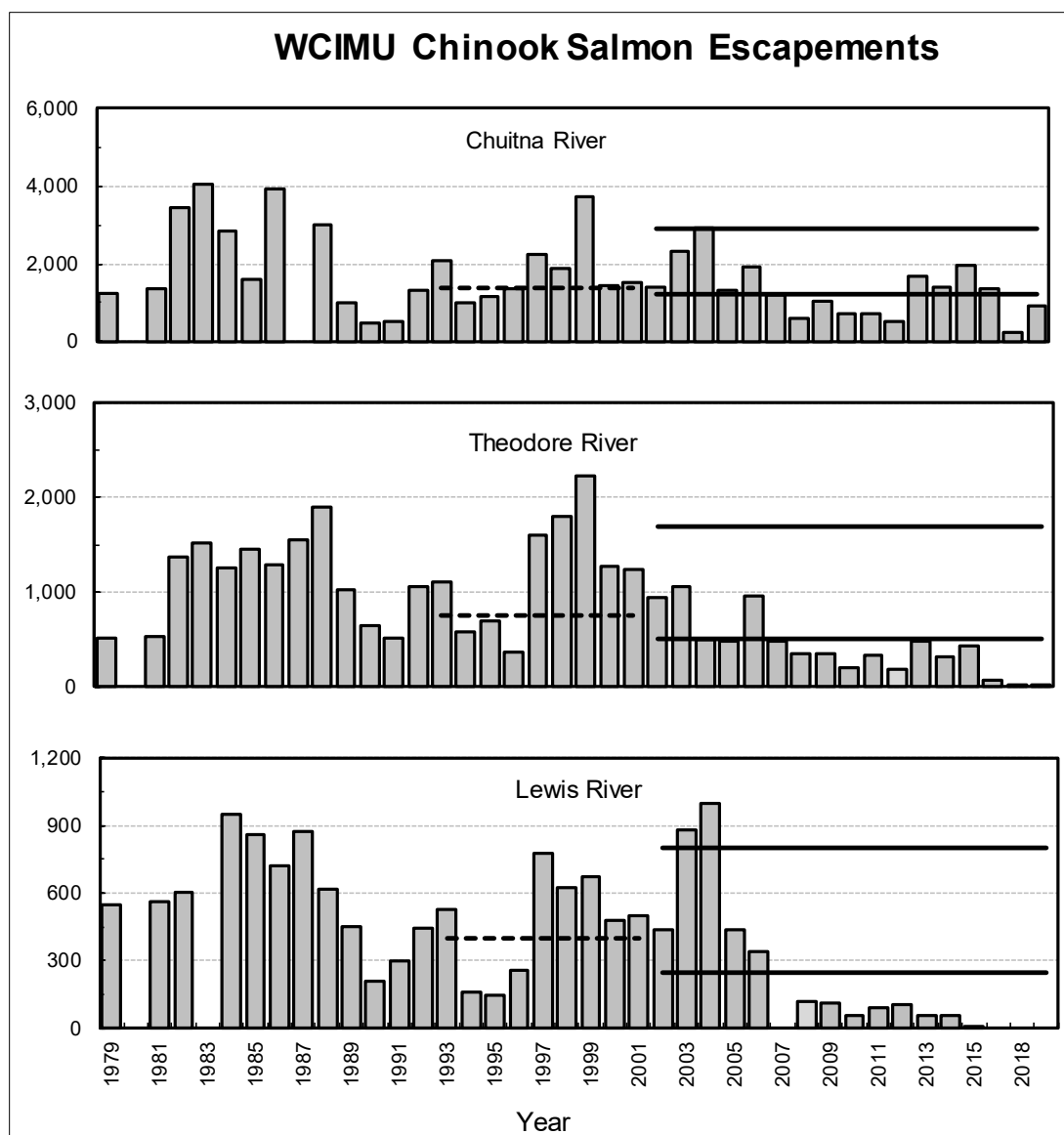


Figure 23.—Chinook salmon escapements at major West Cook Inlet freshwater drainages, 1979–2018.

*Source:* ADF&G aerial survey data.

*Note:* Chinook salmon escapements (number of fish) are shown on the y-axes (scales differ between sites). The dashed line is the biological escapement goal; solid lines are the sustainable escapement goal range.

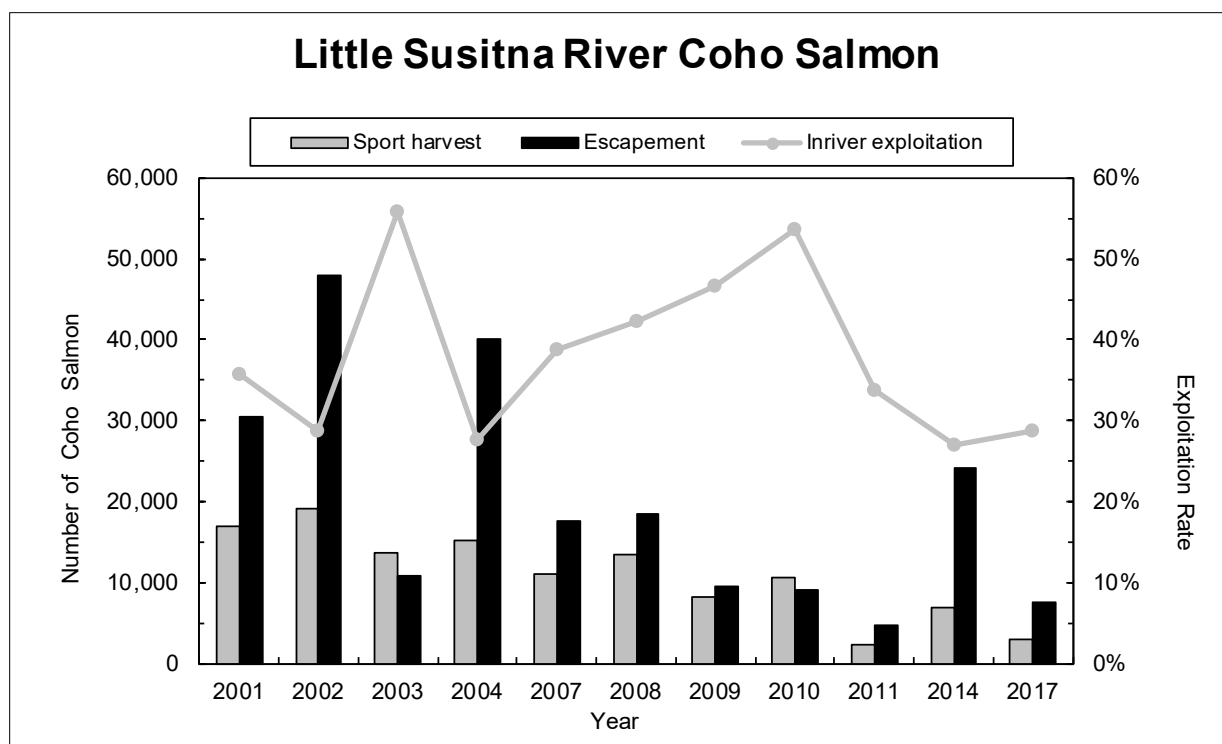


Figure 24.—Coho salmon harvest, escapement, and inriver exploitation from the Little Susitna River sport fishery for years that counts were completed at a weir located at RM 71, 2001–2017.

*Source:* ADF&G aerial survey data and Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

*Note:* Escapement counts in 1997, 2005–2006, 2012–2013, 2015, and 2018 were incomplete due to flooding or other reasons.

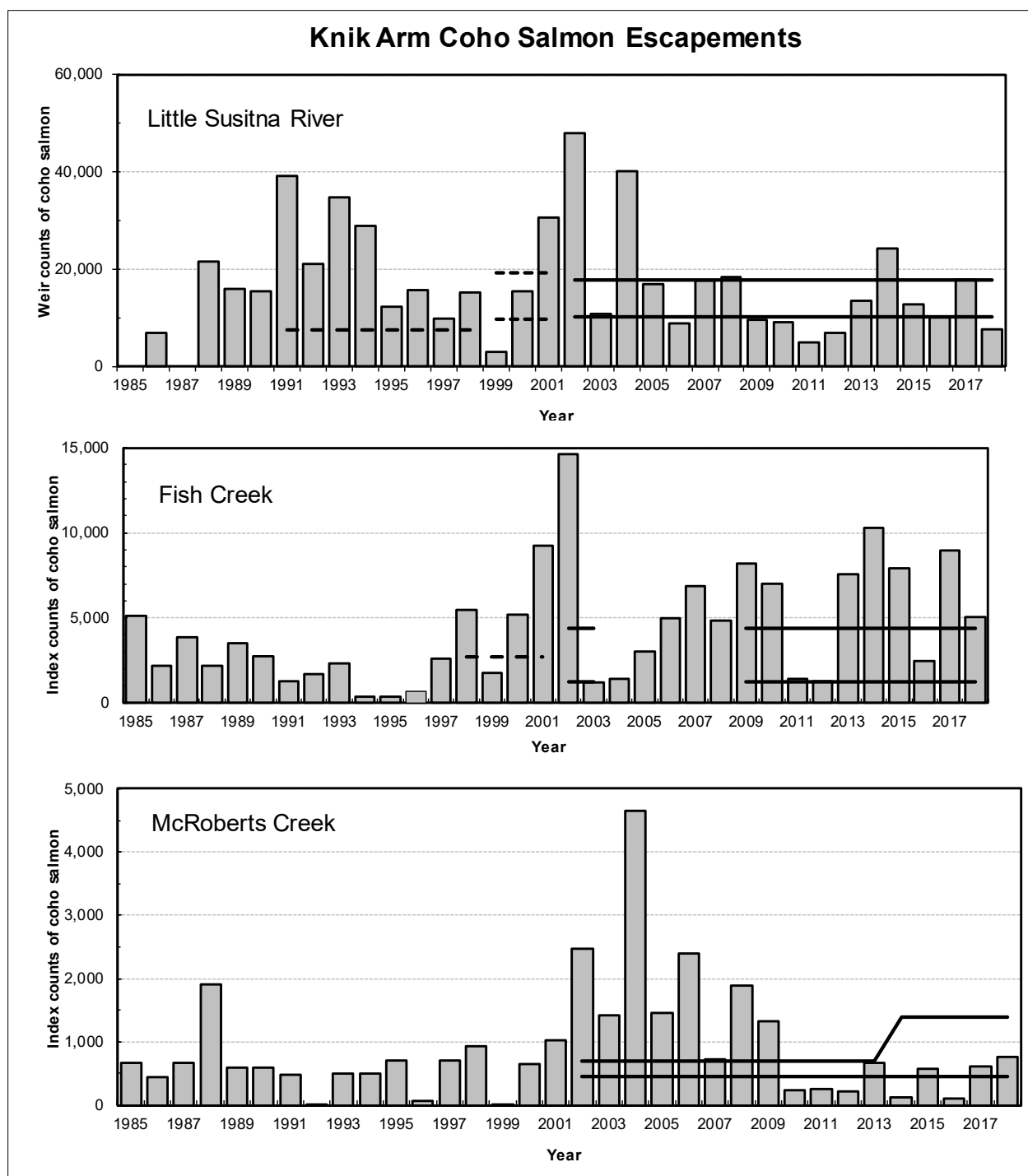


Figure 25.—Little Susitna River weir (top), Fish Creek weir (middle), and McRoberts Creek index counts (bottom) of coho salmon, 1985–2018.

Source: ADF&G foot and weir surveys.

Note: For Little Susitna River, there was no weir in 1985 and 1987; there were incomplete counts in 1986–1997, 2005–2006, 2012–2013, and 2015 due to flooding and weir submersion. The weir was pulled early in 2015. For Fish Creek, the weir was operated primarily for sockeye salmon; complete coho salmon counts were obtained in 1990–1992, 1998–2003, 2009–2010, 2012, and 2014–2015. Dashed lines are a biological escapement goal; solid lines indicate sustainable escapement goal range.

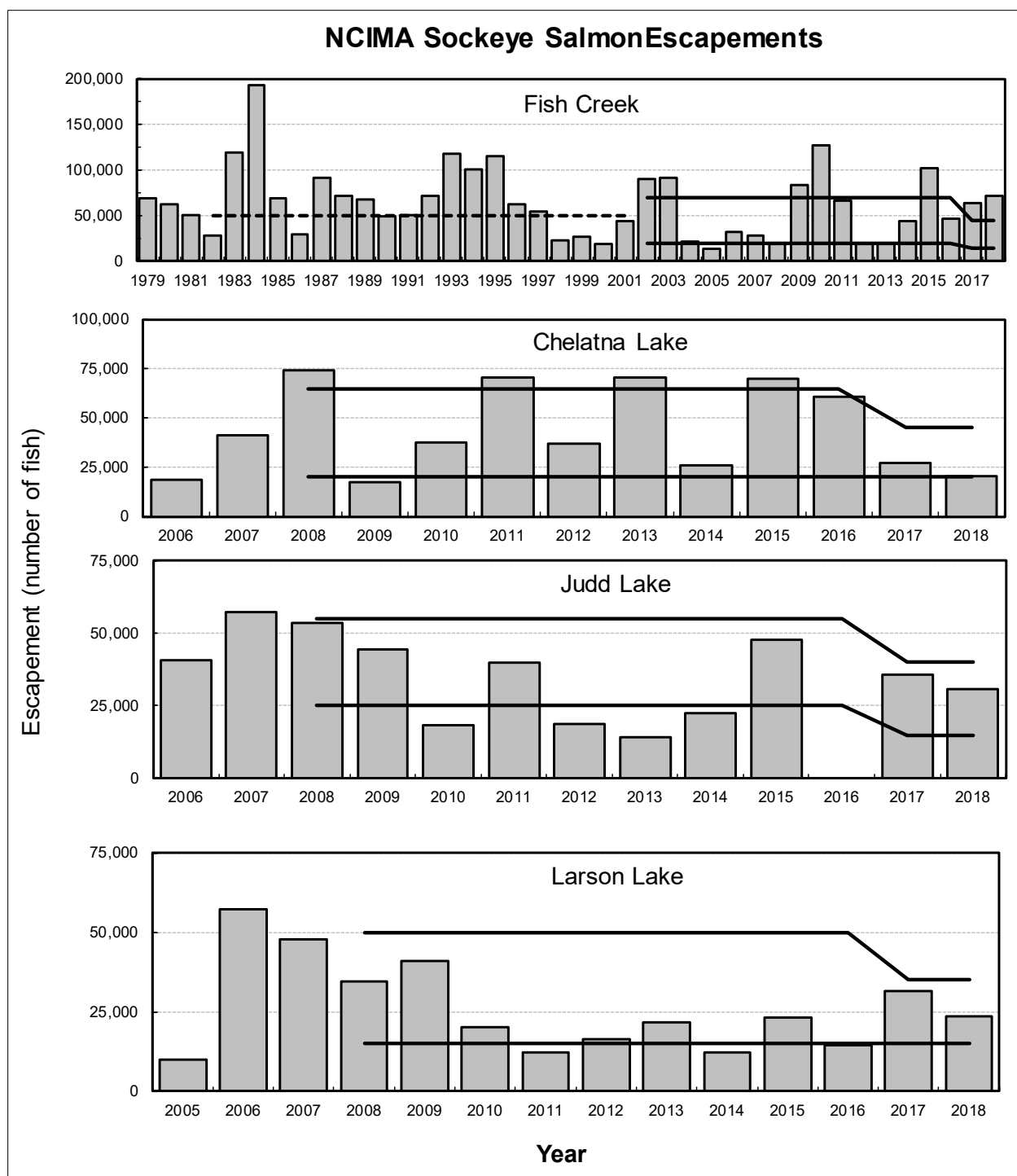


Figure 26.—Estimated sockeye salmon escapements from major fisheries in Northern Cook Inlet Management Area, 1979–2018.

*Note:* Dashed lines indicate an old escapement goal or range; solid lines indicate sustainable escapement goal range.

Figure 27.—Susitna River drainages.

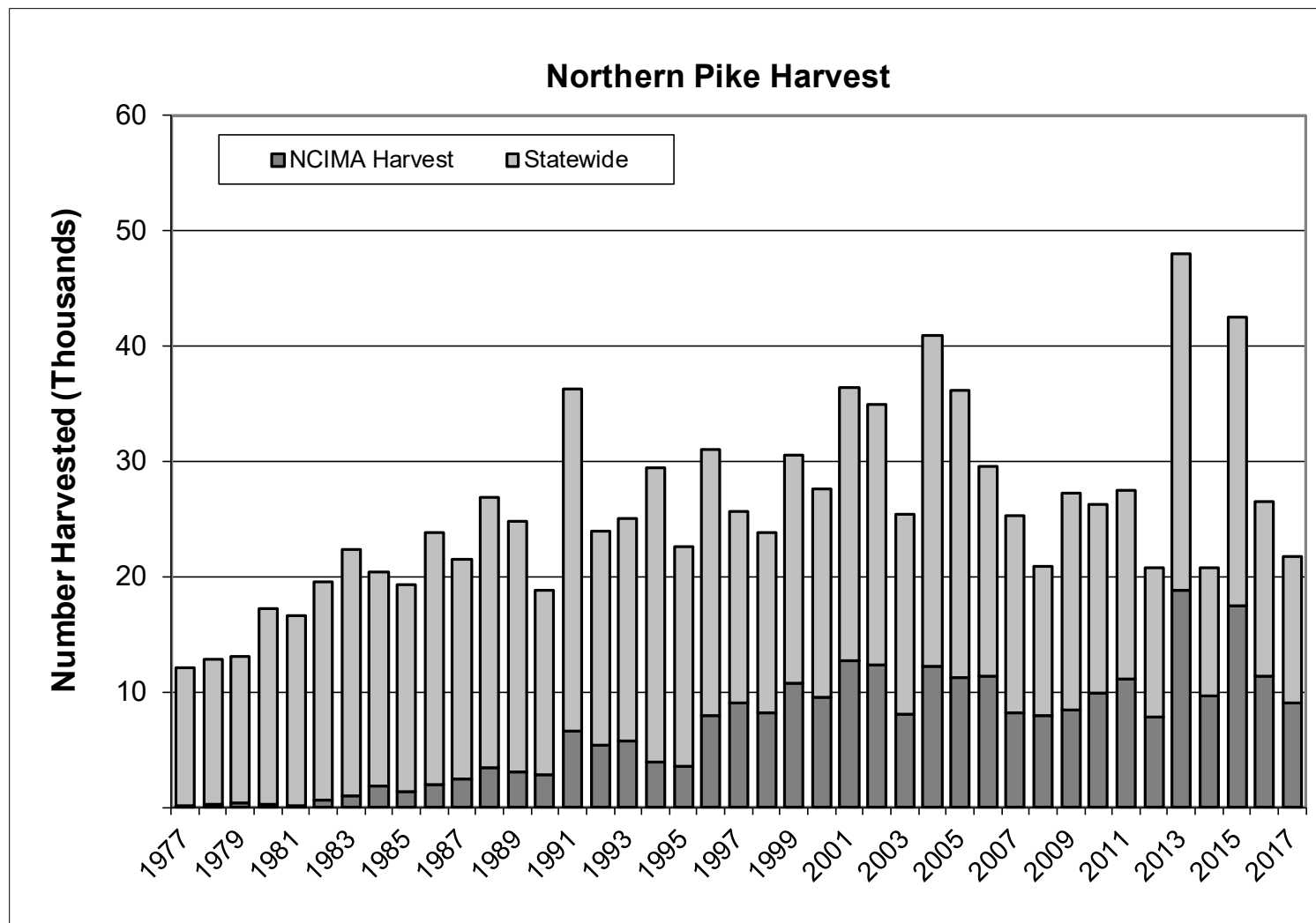


Figure 28.—Estimated northern pike harvest from the Northern Cook Inlet Management Area and statewide, 1977–2017.

Source: Alaska Sport Fishing Survey database [Internet]. 1996–present. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited December 2019). Available from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.



## **APPENDIX A: FISH AND GAME ADVISORY COMMITTEE**

Appendix A1.–Northern Cook Inlet Management Area Fish and Game Advisory Committee members, 2017–2018.

Advisory committee	Last	First
Susitna Valley	Fitzgerald	Billy
	Gustafson	Gus
	Knowles	Bruce
	Mahay	Israel
	Meals	Robert
	Runyan	Steve
	Schacle	Ted
	Schafer	Steven
	Wood	Mike
Matanuska Valley	Alderman	Chris
	Bartelli	Stephen
	Buirge	Mike
	Couch	Andy
	DeWitt	Neil
	Grove	Mel
	Lewis	Danny
	Lipse	Chad
	Manelick	Austin
	Mansavage	Herb
	Marshall	Bob
	Montgomery	Dan
	Nininger	Terry
	Nordstrom	Hans
	Stevens	Tim
	Young	David
	Yuknis	Birch
Mt. Yenlo	Brion	Tom
	Childs	Steve
	Childs	Bonnie
	Gaszak	Alfred
	Ivey	James
	Johnson	Eric
	McHoes	David
	Payton	Tom
	Phillips	Roger
	Stanley	Barry
	Torkelson	Mark

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Advisory committee	Last	First
Denali	Atkins	Ray
	Burney	Jeff
	Carlson	Gordon
	Gore	Bruce
	Gore	Marie
	Holum	Caleb
	Holum	Don
	Mowory	Harold
	Mason	Justin
	Williams	Lance
Tyonek	Al Goozmer	Pedro
	Chuit, Jr.	Lecon
	Chickalusion	Norma
	Chickalusion	Gwen
	Chickalusion	Theodore
	Kroto	Cassandra
	Pfaff	Alex
	Standifer	Randy
	Standifer, Jr.	Donald
	Trenton	Justin
	Verduce	Janelle



## **APPENDIX B: REGULATORY HISTORIES OF SELECTED FISHERIES**

NCIMA waters were open to fishing for Chinook salmon from statehood through 1963. During 1964 through 1966 freshwater fishing for Chinook salmon was closed. During 1967 through 1970 Alexander Creek, Clear Creek, Deshka River and Lake Creek were open in their entirety. This fishery operated over a 15-day season during the middle of June on a harvest quota of 250 fish over 20 inches in length. The season could be closed early if the quota was achieved. A 1 fish per day, 2 per season bag limit for fish over 20 inches in length was in place, and a punch card was required to participate in the fishery. In 1971, the harvest quota was eliminated. During 1971 and 1972, in addition to the 15-day season in Alexander Creek, Deshka River, and Lake Creek, a more restrictive fishery was allowed (few days) in Clear Creek and portions of the Little Susitna River, Ship Creek (Anchorage), and Willow Creek; however, a punch card was still required. In 1973, the area Chinook salmon fishery was closed to the harvest of Chinook salmon 20 inches or larger in length and remained so through 1978.

Select Susitna River streams were reopened to Chinook salmon fishing in 1979 after being closed for several years because of low stock abundance. Cautious incremental expansion has characterized the area's Chinook salmon fisheries since they reopened. From 1979 through 1982, fishing for Chinook salmon was permitted at Alexander Creek, Lake Creek and at the Deshka River from the fourth Saturday in May through July 6. These streams drain into the Susitna River from the west. Clear Creek, a tributary of the Talkeetna River, also had a similar Chinook salmon season. In addition, 3 eastside tributaries of the Susitna River (Willow, Caswell, and Montana creeks) were only open on Saturdays and Sundays for 4 consecutive weekends commencing on the second Saturday in June. Harvest quotas, ranging from 200 to 7,000 Chinook salmon, governed these fisheries from 1979 through 1982. The Chuitna River, a coastal stream near Beluga, and the entire Yentna and Talkeetna river drainages were opened to Chinook salmon fishing in 1983. The opening date for Chinook salmon fisheries that provided continuous daily fishing was also changed to January 1.

In 1984, the remaining coastal streams near Beluga and all waters draining into the westside of the Susitna River downstream from the Deshka River were opened to Chinook salmon fishing. In 1986, portions of 5 road-accessible streams on the east side of the Susitna River opened to weekend-only fishing. These streams were Little Willow, Goose, Sunshine, Sheep and Birch creeks.

Expanded Chinook salmon fishing opportunity continued in 1987 when Monday fishing was added to all former weekend-only fisheries that drain into the Susitna River from the east. Saturday through Monday fishing was also allowed on the Susitna River and all flowing waters within one-quarter mile of the Susitna River (excluding the Kashwitna River) between the Deshka and Talkeetna rivers. These “corridor” fisheries were open for 4 continuous “weekends” similar to the previously mentioned Saturday through Monday fisheries. Fishing for Chinook salmon was permitted for the first time on the Susitna River drainage from the confluence of the Susitna and Talkeetna rivers upstream to Devils Canyon but excluding the Chulitna River drainage. Unbaited, single-hook, artificial lures were mandatory in this area. The season extended from January 1 through July 13. The season for all Susitna River and coastal fisheries that formerly closed on July 6 was extended to July 13 in 1987.

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In 1989, Chinook salmon fishing was allowed within a one-quarter mile radius of the mouth of the Kashwitna River. That same year, fishing was permitted daily at Willow Creek between January 1 and the third Monday in June and on Saturday through Monday for 2 consecutive weeks starting the fourth Saturday in June.

In 1979, bag and possession limits were 1 Chinook salmon 20 inches or over in length. The following year, bag and possession limits changed to 2 Chinook salmon 20 inches or over in length, but only 1 Chinook salmon could be over 28 inches in length. In 1981, the bag limit was reduced to 1 Chinook salmon 20 inches or more in length and in possession. This limit remained in effect through 1985. A limit of 5 fish (20 inches or more in length) per year governed all Cook Inlet Chinook salmon fisheries from 1979 through 1985. This limit applied collectively to Northern Cook Inlet fresh water, Cook Inlet salt water, and the Kenai Peninsula.

In 1986, bag and possession limits for the western drainages of the Susitna River were changed to 2 Chinook salmon, 16 inches or more in length daily and 4 in possession; these limits remained through 1992. Only 1 fish daily and 2 in possession could be over 28 inches. Similar limits also applied to the West Cook Inlet coastal fisheries. Bag and possession limits for eastern drainages of the Susitna River in 1986 were 1 Chinook salmon, 16 inches or more in length, and 2 in possession. The seasonal limit was 5 Chinook salmon 16 inches or more in length. From 1979 through 1988, anglers were required to list their Chinook salmon harvest on nontransferable harvest records. The date and location of harvested Chinook salmon were recorded. From 1980 through 1982, a \$5 permit stamp was mandatory when fishing for Chinook salmon. The harvest record and yearly limit was eliminated for all NCI Chinook salmon fisheries in 1989.

During the November 1992 BOF meeting, several regulations were changed in the Susitna–West Cook Inlet Management Area effective for the 1993 season. A seasonal limit of 5 Chinook salmon was established for all waters of Cook Inlet. Individuals or companies engaged in freshwater sport fish guiding were prohibited from participating or engaging in sport fishing while clients were present or within his or her control or responsibility during the Chinook salmon season except when guiding a client subject to the Americans with Disabilities Act.

In effect for the 1993 season in the West Cook Inlet area, the Chinook salmon fishing season was reduced in length to end on June 30. The bag and possession limits were reduced in areas open to the retention of Chinook salmon 16 inches or more in length to 1 daily and 1 in possession.

Additionally, only unbaited, artificial lures could be used, Chinook salmon 16 inches or more in length could not be possessed or retained, and all Chinook salmon caught had to be released immediately in the following areas of West Cook Inlet: 1) the Chuitna River drainage upstream of an ADF&G marker located adjacent to the old cable crossing, 2) the Theodore River drainage upstream of an ADF&G marker located approximately 1 mile upstream of the Beluga–Anchorage high voltage power lines, and 3) the Lewis River drainage upstream of an ADF&G marker located approximately 1 river mile upstream of the main Beluga haul road bridge.

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Action during the November 1992 BOF meeting also reduced the Chinook salmon bag and possession limits in the Susitna River drainage including all flowing waters draining into the west side of the Susitna River downstream of and including the Deshka River. The bag and possession limits for Chinook salmon over 16 inches were reduced to 1 daily and 2 in possession.

In addition to BOF action, legislative action during June of 1992 established provisions beginning in 1993 that prohibited resident or nonresident anglers from fishing in Alaska without a king (Chinook) salmon stamp.

Prior to the 1994 season, in anticipation of a poor Deshka River Chinook salmon run, an emergency order (EO) was issued reducing the Chinook salmon possession limit to 1 fish and eliminating the use of bait in the Deshka River from May 1 through July 14. As the 1994 Chinook season progressed, it became apparent weak Chinook salmon runs were occurring in the entire Susitna River drainage and particularly in the Deshka River. In response to this, an EO was issued June 17–July 13, 1994, closing all waters of the Deshka River to sport fishing for Chinook salmon and prohibiting the use of bait in all waters of the Susitna River drainage downstream of the Deshka River that flow into the Susitna River from the east and into the Alexander Creek drainage, all waters of the Yentna River drainage, all waters of the Talkeetna River drainage, and all waters of the Chulitna River drainage.

During its October work session, the BOF chose to delegate to ADF&G the authority to change regulations for the 1995 fishing season. These changes were as follows:

- 1) The Deshka River and Prairie Creek were closed to fishing for Chinook salmon.
- 2) Alexander Creek above the confluence of Trail Creek was closed to fishing for Chinook salmon.
- 3) The bag and possession limits in the Susitna River and Little Susitna River drainages were reduced to 1 Chinook salmon over 16 inches in length.
- 4) The use of bait throughout the NCIMA was prohibited (excluding the Anchorage Management Unit).
- 5) Fishing in the NCIMA was allowed only between the hours of 6:00 AM and 11:00 PM from May 15 through July 13. This time restriction will not apply to that portion of the Susitna River drainage currently opened to weekend-only fishing (e.g., between, but not including, the Deshka River and the Talkeetna River), and the Anchorage Management Unit.
- 6) The first opening of the Northern District commercial Chinook salmon fishery would occur by emergency order. Additional opening of this fishery would be dependent upon inseason indications of run strength.

The only new regulation for the 1996 season was the closure of the Lewis River to fishing for Chinook salmon, including catch-and-release fishing.

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The BOF convened in Anchorage, Alaska during November 11–17, 1996. A brief summary of regulatory changes adopted by the BOF affecting the Susitna–West Cook Inlet Area Chinook salmon fisheries follows (note that “king” replaces “Chinook” in the regulatory language and “department” refers to Alaska Department of Fish and Game).

5 AAC 21.366. Northern District King Salmon Management Plan

To fulfill changes to the Upper Cook Inlet King Salmon Management Plan, as adopted by the Board of Fisheries, the Department of Fish and Game shall manage the Northern District commercial king salmon fishery as follows:

- (3) The harvest shall not exceed 12,500 king salmon.
- (8) The season closes on June 24, unless closed earlier by emergency order.
- (9) The number of regular periods shall be determined by the department based on preseason expectations of king salmon run strength.
- (10) The area from 1 mile south of the Theodore River to the Susitna River is closed to fishing; provisions of this paragraph do not apply after December 31, 1998.
- (11) If at least 90% of the biological escapement goal for the Theodore River (BEG = 750) or Chuitna River (BEG = 1,400) is not met during the 1997 fishing season, the area from 1 mile south of the Chuitna River to the Susitna River will be closed to commercial fishing during the 1998 fishing season; the provisions of this paragraph do not apply after December 31, 1998.
- (12) In addition to (11) above, if at least 90% of the biological escapement goal for the Chuitna River has not been met during the 1997 fishing season, the area from 1 mile south of the Chuitna River to the Susitna River will be closed to sport fishing for king salmon during the 1998 fishing season; the provisions of this paragraph do not apply after December 31, 1998.

5 AAC 61.010. Fishing Seasons

The Alexander Creek drainage is open to the retention (harvest) of king salmon from January 1 through June 30 downstream from an ADF&G regulatory marker at Granite Creek.

5 AAC 61.020. Bag Limits, Possession Limits, and Size Limits

In all waters of Alexander Creek drainage between an ADF&G regulatory marker located at Granite Creek, upstream to an ADF&G regulatory marker located 400 yards upstream of Trail Creek, king salmon 16 inches or more in length may not be possessed or retained. All king salmon caught must be released immediately.

5 AAC 61.035. Methods and Means

Only unbaited, single-hook, artificial lures may be used from January 1 through June 30 in all waters of the Alexander Creek drainage between an ADF&G regulatory marker located at Granite Creek to an ADF&G regulatory marker located 400 yards upstream of Trail Creek.

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5 AAC 61.050. Waters Closed to Sport Fishing

- 1) Peters Creek (Susitna River drainage) is closed to sport fishing for king salmon upstream from an ADF&G regulatory marker, located approximately 1 mile upstream from its confluence with the Kahiltna River.
- 2) The Theodore River is closed to sport fishing for king salmon. The provisions of this paragraph do not apply after December 31, 1998.

5 AAC 61.020. Bag Limits, Possession Limits, and Size Limits

- 1) In all waters of the Susitna River drainage between the confluence of the Deshka River and the confluence of the Talkeetna River: after taking a king salmon 16 inches or more in length, a person may not fish for any species of fish in any water open to king salmon fishing during that same day.
- 2) In the Little Susitna River from its mouth to the Parks Highway bridge at Houston: after taking a king salmon 16 inches or more in length, a person may not fish for any species of fish in any water open to king salmon fishing during that same day.
- 3) In all waters of the Susitna–West Cook Inlet Management Area, excluding the Susitna River between its confluence with the Deshka River and its confluence with the Talkeetna River: after taking a king salmon 16 inches or more in length, a person may not fish for king salmon during that same day.

5 AAC 61.020. Bag Limits, Possession Limits, and Size Limits

The bag and possession limits of king salmon 16 inches or more in length taken from the Little Susitna River drainage are 1 fish per day and in possession.

During 1997, the Deshka River was open to Chinook salmon fishing on June 21 through July 13. Fishing was limited to the lower 2 miles of river and all Chinook salmon regulations applying to the Susitna River from its mouth to its confluence with the Deshka River were in effect for the Deshka River.

In 1998, the Deshka River was open to Chinook salmon fishing from its confluence with the Susitna River upstream 5 miles to an ADF&G marker. The seasonal bag limit was 2 Chinook salmon over 16 inches from the Deshka River. In addition, all Chinook salmon regulations applying to the Susitna River from its mouth to its confluence with the Deshka River were in effect for the Deshka River. Inseason EOs opened Willow Creek June 20–22 to Chinook salmon fishing to correct an oversight in the regulations, and 1 Friday was added to Chinook salmon fishing in the Susitna River between the Deshka River and the Talkeetna River (excluding both).

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The BOF made the following changes for the 1999 season. The Deshka River was open to Chinook salmon fishing from its mouth upstream to Chijuk Creek, a distance of approximately 17 river miles from January 1 to July 13. Other area regulations applied, including bag and possession limits of 1 fish per day, a seasonal limit of 5 fish, and upon harvesting a Chinook salmon, an angler must quit fishing for Chinook salmon the remainder of the day. Additionally, fishing was allowed only between the hours of 6:00 AM to 11:00 PM, no bait was allowed, and guides were not allowed to fish while guiding clients.

During the 1997 and 1998 seasons, the area open for retention of Chinook salmon on Alexander Creek was extended from its mouth upstream to Trail Creek, providing anglers with an additional 11 miles of stream in which they could harvest Chinook salmon on Alexander Creek.

The Theodore River was opened to catch-and-release fishing for Chinook salmon with only single hook artificial lures from January 1 through June 30. Other West Cook Inlet Area regulations applied as follows: fishing was allowed only between the hours of 6:00 AM to 11:00 PM, bait was prohibited, and guides were not allowed to fish while guiding.

There were increased fishing opportunities for the road-accessible Parks Highway streams (Eastside Susitna River tributaries) during the early part of June. The Parks Highway streams were open to Chinook salmon fishing from January 1 through the third Monday in June and for the next 2 consecutive 3-day weekends. This regulation was consistent with the fishing season on Willow Creek.

On the Little Susitna River, anglers were allowed to use treble hooks year-round downstream of the Parks Highway Bridge. Existing bait restrictions were modified to allow the use of bait during the month of September.

The area open to Chinook salmon fishing on the Kashwitna River was extended from its mouth upstream to the Parks Highway Bridge, a distance of 2 miles. The new season regulations for Parks Highway streams (above) were applied to the Kashwitna River.

In all waters of the Westside Susitna River and West Cook Inlet Management Areas (excluding waters between the mouths of the Deshka and Talkeetna rivers), anglers were allowed to continue to fish for Chinook salmon (catch-and-release) once they harvested their limit (excluding Alexander Creek, Lake Creek, Deshka River, Fish Lake Creek and Clear Creek, which all required that fishing for Chinook salmon cease for the day once the limit was harvested).

During January 2001, the BOF imposed a statewide definition of “jack” king (Chinook) salmon as any Chinook salmon 20 inches or less in length. In all fresh waters open to Chinook salmon fishing, the BOF imposed bag and possession limits for “jacks” of 10 fish in addition to any limits for Chinook salmon over 20 inches in length, and ruled that “jack” limits do not count against annual or seasonal limits. This new definition increased the length requirement for Chinook salmon that must be recorded for the 5-fish seasonal limit from 16 inches to 20 inches.

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A BOF meeting was held in February of 2002, resulting in the following changes in Chinook salmon regulations:

- 1) Catch-and-release fishing was allowed for Chinook salmon in the east fork of the Chulitna River January 1 through July 13. Only 1 single-hook, unbaited artificial lure could be used January 1 through July 13.
- 2) The possession limit was increased to 2 Chinook salmon for Westside Susitna River tributaries (excluding Alexander Creek).
- 3) In the *Northern District King Salmon Management Plan*, the following was established: the commercial setnet fishery opens on the first Monday on or after May 25 and closes June 24. The number of commercial periods depends upon expected northern Cook Inlet Chinook salmon run strengths, and there shall be no more than 3 commercial openings targeting Chinook salmon. The area from an ADF&G marker located 1 mile south of the Theodore River to the Susitna River is open to fishing in the second regular period only. If the Theodore, Lewis, or Ivan rivers are closed to sport fishing, the area from an ADF&G regulatory marker located 1 mile south of the Theodore River to the Susitna River is closed to commercial Chinook salmon fishing for the remainder of the directed Chinook salmon fishery. If the Deshka River is closed to sport fishing, the commercial Chinook salmon fishery throughout the Northern District is closed for the remainder of the directed Chinook salmon fishery. If the Chuitna River is closed to sport fishing, the area from an ADF&G marker located 1 mile south of the Chuitna River to the Susitna River is closed to commercial Chinook salmon fishing for the remainder of the directed Chinook salmon fishery.
- 4) Catch-and-release fishing was allowed in the entire Theodore and Lewis rivers with no bait and single hook only.

These regulations were not signed into law prior to the start of the 2002 season. Because of this delay, the following EOs were issued to allow the new regulations to be in effect during the beginning of the fishing season:

- 1) The possession limit was increased to 2 Chinook salmon in all Westside Susitna River tributaries except Alexander Creek.
- 2) The entire Theodore and Lewis rivers were opened to catch-and-release for Chinook salmon through June 30 with single hook and no bait.
- 3) The use of bait was allowed in the first 17 miles of the Deshka River and within a one-quarter mile radius of the mouth of the Deshka River with the Susitna River, June 8 through July 13, 2002.

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A BOF meeting was held January 2005 and included the following changes to the Chinook salmon sport fish regulations:

- 1) Anglers were allowed to use bait earlier in the Deshka River commencing May 15.
- 2) The Parks Highway streams were opened to Chinook salmon fishing for an additional 3-day weekend. For 2005, the Parks Highway streams were open from January 1 to June 20 and on June 25–27, July 2–4 and July 9–11.
- 3) The area open to Chinook salmon fishing on the Kashwitna River was increased by approximately 1 mile from the Parks Highway Bridge to the Alaska Railroad Bridge.
- 4) Anglers could no longer fish for Chinook salmon 20 inches or less in waters closed to Chinook salmon fishing.
- 5) Eklutna Tailrace and all waters within a one-half mile radius of its confluence with the Knik River were opened to fishing for Chinook salmon from January 1 through December 31. Once a bag limit of Chinook salmon 20 inches or longer was retained, an angler could not fish in any water open to Chinook salmon fishing on that same day.

Commercial fish regulatory changes included the following:

- 1) Alterations to the *Northern District King Salmon Management Plan* limited fishing periods to a maximum of 3, increased fishing time per period from 6 hours to 12 hours, and removed the gear restriction of 2 nets from August 1 to August 10.
- 2) The *Big River Sockeye Salmon Management Plan* was amended to allow fishing in a portion of the Kalgin Island Subdistrict along the western shore from Light Point (lat 60°29.00'N, long 151°50.50'W) to the Kalgin Island Light on the southern end of the island (lat 60°20.80'N, long 152°05.09'W). This fishery was closed if 1,000 Chinook salmon were harvested.

In February 2008, a BOF meeting resulted in the following Chinook salmon regulation changes:

- 1) Alexander Creek was closed to king salmon fishing.
- 2) The area open to Chinook salmon fishing at the Eklutna Tailrace was expanded. In addition to the Tailrace and waters within a one-half mile radius of the mouth, anglers were allowed to fish downstream to an ADF&G marker located approximately 2 miles downstream of the Tailrace mouth.

In 2009, the BOF enacted an emergency regulation on May 20 to reduce the fishing time in the Northern District setnet fishery from 12 to 6 hours by allowing commercial salmon fishing to occur only between 7:00 AM and 1:00 PM. On June 11, the Northern District was closed to the harvest of Chinook salmon for the remainder of the fishing periods scheduled for 2009 due to the closure of the Deshka River Chinook salmon sport fishery.

A BOF meeting held in February 2011 resulted in the following Chinook salmon regulation changes:

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- 1) The Chuitna, Theodore, Lewis, and Beluga rivers were closed to sport fishing for Chinook salmon.
- 2) Goose Creek within Unit 2 of the Susitna River was closed to sport fishing for Chinook salmon.
- 3) For Parks Highway streams within Unit 2 of the Susitna River that are open to Chinook salmon fishing
  - a) the fishing season was shortened (fishing was open until the third Monday in June and for the following 2 consecutive 3-day [Saturday–Monday] weekends; for 2011, the season was from January 1 to June 20, June 25 to June 27, and July 2 to July 4),
  - b) from May 15 to July 13, fishing for all species was allowed only from 6:00 AM to 11:00 PM, and
  - c) these new regulations applied to Willow, Little Willow, Grays, Caswell, Sheep, Montana, Sunshine, and Rabideux creeks, and the Kashwitna River.
- 4) Fishing from a boat for any species was prohibited on a portion of the Susitna River at the farthest downstream mouth of Willow Creek, also known as the “first mouth” of Willow Creek, from May 1 to July 13. Markers located on the upstream bank and downstream approximately 300 yards delineated the area closed to fishing from a boat.
- 5) On the Talachulitna River, anglers retaining Chinook salmon 20 inches or longer must stop fishing for Chinook salmon within a 1-mile radius of the mouth of the Talachulitna River for the remainder of the day.
- 6) Fishing for any species was closed within a one-half mile radius of the mouth of Alexander Creek from May 1 to July 13.
- 7) A “stock of concern” status was established for Chinook salmon stocks in the Chuitna, Theodore, and Lewis rivers within the WCIMU; a “stock of yield concern” status was established for Goose and Willow creeks (Parks Highway streams) of the Susitna River; and a “stock of management concern” status was established for Alexander Creek of the lower Susitna River.
- 8) The area closed to commercial fishing was extended from 1 mile to about 4.8 miles south of the Chuitna River.

No new regulations were issued in 2012–2013.

A BOF meeting in 2014 resulted in the following Chinook salmon regulation change:

- 1) For the Deshka River, the starting date when bait is allowed by regulation was changed from May 15 to June 1.
- 2) A youth-only fishery for ages 15 and younger was designated at the Eklutna Tailrace for the third Saturday in June from 6:00 AM to 6:00 PM from the confluence with the Knik River upstream to the pedestrian bridge.

No new regulations were issued in 2015–2018.

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Appendix B2.—Deshka River Chinook salmon regulatory changes, 1977–2018.

Year	Fishery dates	Area and time restrictions	Method and gear restrictions	Bag and possession limits	Seasonal NCI limit	Other requirements
1977	closed to adults			≤20 in only		
1978	closed to adults			≤20 in only		
1979	4th Sat. in May–6 Jul	mouth to Laub's Homestead marker		1/day >20 in and 1 in possession	5 >20 in	punch card required
1980	4th Sat. in May–6 Jul	mouth to forks		2/day >20 in, only 1 >28 in and 2 in possession	5 >20 in	punch card required
1981	4th Sat. in May–6 Jul	mouth to forks		1/day >20 in and 2 in possession	5 >20 in	harvest record sticker
1982	4th Sat. in May–6 Jul	mouth to forks		1/day >20 in and 2 in possession	5 >20 in	permit stamp with record on back of license
1983	1 Jan–6 Jul	mouth to forks		1/day >20 in and 2 in possession	5 >20 in	harvest record on back of license
1984	1 Jan–6 Jul	mouth to forks		1/day >20 in and 2 in possession	5 >20 in	harvest record on back of license
1985	1 Jan–6 Jul	mouth to forks		1/day >20 in and 2 in possession	5 >20 in	harvest record on back of license
1986	1 Jan–6 Jul	mouth to forks		2/day >16 in and 4 in possession, only 1/day >28 in and 2 in possession	5 >16 in	harvest record on back of license
1987	1 Jan–13 Jul	mouth to forks		2/day >16 in and 4 in possession, only 1/day >28 in and 2 in possession	5 >16 in	harvest record on back of license
1988	1 Jan–13 Jul	mouth to forks		2/day >16 in and 4 in possession, only 1/day >28 in and 2 in possession	5 >16 in	harvest record back of license
1989	1 Jan–13 Jul	mouth to forks		2/day >16 in and 4 in possession, only 1/day >28 in and 2 in possession	5 >16 in	
1990	1 Jan–13 Jul	mouth to forks		2/day >16 in and 4 in possession, only 1/day >28 in and 2 in possession	5 >16 in	
1991	1 Jan–13 Jul	mouth to forks		2/day >16 in and 4 in possession, only 1/day >28 in and 2 in possession	5 >16 in	

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Year	Fishery dates	Area and time restrictions	Method and gear restrictions	Bag and possession limits	Seasonal NCI limit	Other requirements
1992	1 Jan–13 Jul	mouth to forks	no bait between Trapper Creek and forks on 22 Jun by EO	1/day >16 in and 1 in possession, release of fish >16 in between Trapper Creek and forks on 22 Jun by EO	5 >16 in	
1993	1 Jan–13 Jul	mouth to forks	artificial only until 15 May	1/day >16 in and 2 in possession	5 >16 in	king stamp with harvest record on back of license
1994	closed 17 Jun by EO	mouth to forks	artificial only until 16 May	1/day >16 in and 2 in possession	5 >16 in	king stamp with harvest record on back of license
1995	closed					
1996	closed					
1997	opened 21 Jun by EO	lower 2 miles of river	artificial only	1/day >16 in and 1 in possession	5 >16 in	king stamp with harvest record on back of license
1998	1 Jan–13 Jul	lower 5 miles of river	artificial only	1/day >16 in and 1 in possession	5 >16 in with only 2 from Dershka	king stamp with harvest record on back of license
1999	1 Jan–13 Jul	mouth to Chijuk Creek: 6 AM–11 PM	artificial only	1/day >16 in and 1 possession	5 >16 in	king stamp with harvest record on back of license
2000	1 Jan–13 Jul	mouth to Chijuk Creek: 6 AM–11 PM	bait allowed 8 Jun by EO	1/day >16 in and 1 in possession	5 >16 in	king stamp with harvest record on back of license
2001	1 Jan–13 Jul	mouth to Chijuk Creek: 6 AM–11 PM	bait allowed 12 Jun by EO	1/day >20 in and 1 in possession	5 >20 in	king stamp with harvest record on back of license
2002	1 Jan–13 Jul	mouth to Chijuk Creek: 6 AM–11 PM	bait allowed 8 Jun by regulation	1/day >20 in and 2 in possession	5 >20 in	king stamp with harvest record on back of license
2003	1 Jan–13 Jul	mouth to Chijuk Creek: 6 AM–11 PM	bait allowed 8 Jun by regulation	2/day >20 in and 4 in possession on 18 Jun by EO	5 >20 in	king stamp with harvest record on back of license
2004	1 Jan–13 Jul	mouth to Chijuk Creek: 6 AM–11 PM	bait allowed 28 May by EO	2/day >20 in and 4 in possession on 12 Jun by EO	5 >20 in	king stamp with harvest record on back of license
2005	1 Jan–13 Jul	mouth to Chijuk Creek: opened 24-hr on 27 May by EO	bait allowed 15 May by regulation	2/day >20 in and 4 in possession on 27 May by EO	5 >20 in	king stamp with harvest record on back of license

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Year	Fishery dates	Area and time restrictions	Method and gear restrictions	Bag and possession limits	Seasonal NCI limit	Other requirements
2006	1 Jan–13 Jul	mouth to Chijuk Creek: opened 24-hr on 26 May by EO	bait allowed 15 May by regulation	2/day >20 in and 4 in possession on 26 May by EO	5 >20 in	king stamp with harvest record on back of license
2007	1 Jan–13 Jul	mouth to Chijuk Creek: opened 24-hr on 25 May by EO	bait allowed 15 May by regulation	2/day >20 in and 4 in possession on 25 May by EO	5 >20 in	king stamp with harvest record on back of license
2008	1 Jan–13 Jul	mouth to Chijuk Creek: 6 AM–11 PM, fishery closed 19 Jun by EO	bait not allowed 14 Jun–13 Jul by EO	1/day >20 in and 1 in possession	5 >20 in	king stamp with harvest record on back of license
2009	1 Jan–13 Jul	mouth to Chijuk Creek: 6 AM–11 PM, retention Sat, Sun, Mon only 13 May by EO, fishery closed 11 Jun by EO	bait not allowed after 20 Apr by EO.	1/day >20 in and 1 in possession	5 >20 in	king stamp with harvest record on back of license
2010	1 Jan–13 Jul	mouth to Chijuk Creek: 6 AM–11 PM	bait not allowed 12–19 Jun by EO	1/day >20 in and 1 in possession	5 >20 in	king stamp with harvest record on back of license
2011	1 Jan–13 Jul	mouth to Chijuk Creek: 6 AM–11 PM	bait allowed 15 May by regulation	1/day >20 in and 1 in possession	5 >20 in	king stamp with harvest record on back of license
2012	1 Jan–13 Jul	mouth to Chijuk Creek: 6 AM–11 PM, closed above weir after 19 Jun by EO, fishery closed 25 Jun by EO	single hook only after 1 May EO, bait not allowed after 19 Jun by EO	1/day >20 in and 1 in possession	2 >20 in by EO	king stamp with harvest record on back of license
2013	1 Jan–13 Jul	mouth to Chijuk Creek: 6 AM–11 PM	single hook only after 1 May by EO, bait not allowed 1 May–29 Jun by EO	1/day >20 in and 1 in possession	2 >20 in by EO	king stamp with harvest record on back of license
2014	June 1	mouth to Chijuk Creek	bait allowed 1 June by regulation	1/day >20 in and 1 in possession	2 >20 in by EO	king stamp with harvest record on license

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Year	Fishery dates	Area and time restrictions	Method and gear restrictions	Bag and possession limits	Seasonal NCI limit	Other requirements
2014	1 May–13 Jul	mouth to Chijuk Creek	single hook only, harvest Fri–Mon only	1/day >20 in and 1 in possession	2 >20 in by EO	king stamp with harvest record on license
2015	1 May–13 Jul	mouth to Chijuk Creek	single hook only, annual limit 2	1/day >20 in and 1 in possession	2 >20 in by EO	king stamp with harvest record on license
2015	13 Jun–13 Jul	mouth to Chijuk Creek	bait allowed by EO	1/day >20 in and 1 in possession	2 >20 in by EO	king stamp with harvest record on license
2015	27 Jun–13 Jul	mouth to Chijuk Creek	annual limit 5	1/day >20 in and 1 in possession	5 >20 in by EO	king stamp with harvest record on license
2016	1 May–13 Jul	mouth to Chijuk Creek	annual limit 2, multiple hooks	1/day >20 in and 1 possession	2 >20 in by EO	king stamp with harvest record on license
2016	11 Jun–13 Jul	mouth to Chijuk Creek	annual limit 5	1/day >20 in and 1 in possession	5 >20 in by EO	king stamp with harvest record on license
2017	May 1–July 13	mouth to Chijuk Creek	annual limit 2	1/day >20 in and 1 in possession	2 >20 in by EO	king stamp with harvest record on license
2017	July 4–July 13	mouth to Chijuk Creek	closed			
2018	May 1–13 Jul	mouth to Chijuk Creek	Single hook, catch and release			king stamp with harvest record on license
2018	June 22–13 Jul	mouth to Chijuk Creek	closed			

*Note:* Chinook salmon are “king” salmon in the regulatory language.

## 1995

The *Upper Cook Inlet Subsistence Salmon Management Plan* was repealed by the Alaska Board of Fisheries (BOF) in 1995. BOF took action to allow subsistence fishery as a personal use fishery. The Knik set gillnet fishery was executed as a personal use fishery.

## 1996

- 1) The *Upper Cook Inlet Personal Use Salmon Fishery Management Plan* (5 AAC 77.540) established time, area, methods and means for taking salmon for personal use. This plan first went into effect during the 1996 season. It provided for personal use dip net fisheries in the Kenai and Kasilof rivers and Fish Creek. Additionally, limited personal use gillnet fishing opportunity was provided near the terminus of the Kasilof River. No Knik set gillnet fishery was provided.
- 2) Changes were made to the *Fish Creek Sockeye Management Plan* (5 AAC 21.364) concerning the Fish Creek personal use dip net fishery. The dip net fishery was opened July 10 through July 31 with a bag limit of 25 salmon per head of household plus 10 salmon per each household member. A permit was required.
- 3) The *Skwentna River Personal Use Salmon Fishery Management Plan* (5 AAC 77.526) established a subsistence fish wheel fishery in the Yentna River downstream of its confluence with the Skwentna River. This fishery was implemented as a personal use fishery during the 1996 and 1997 seasons.
- 4) The *Little Susitna River Coho Salmon Management Plan* (5 AAC 60.170) was modified to repeal the increase the bag and possession limits of coho salmon in specified areas of the Little Susitna River when the escapement goal was projected to be 7,500 nonhatchery fish upstream of the Parks Highway. The bag and possession limits of salmon other than Chinook salmon in the Little Susitna River were 3 fish per day and in possession.
- 5) At the November 1996 meeting, the BOF modified 5 AAC 61.035 (*Methods and means*). Only unbaited, single-hook, artificial lures could be used in all flowing waters of the Alexander Creek drainage upstream of an ADF&G regulatory marker located 400 yards upstream of the confluence of Trail Creek.

## 1998

The *Upper Yentna River Subsistence Salmon Fishery* (5 AAC 01.593) established a subsistence fish wheel fishery in the Yentna River downstream of its confluence with the Skwentna River. This fishery was implemented as a personal use fishery during the 1996 and 1997 seasons. State Supreme Court and BOF action changed it to a subsistence fishery beginning in 1998. This change did not affect coho salmon harvest.

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## 1999

- 1) Sport fishing time on Fish, Wasilla, and Cottonwood creeks was reduced. Fishing hours were restricted from 24-hour fishing days to 12-hour fishing days (6:00 AM to 6:00 PM) in these Saturday and Sunday only fisheries. An angler could no longer fish on these streams for the remainder of the day once that angler had harvested a bag limit of 3 salmon other than Chinook salmon.
- 2) In all waters of West Cook Inlet south of the Susitna River (i.e., the Chuitna, Lewis, Theodore, and McArthur rivers), once an angler harvested a bag limit of 3 coho salmon, that angler could no longer fish these streams for the remainder of the day. These same streams were closed to coho salmon fishing from October 1 to December 31.
- 3) For the Little Susitna River, existing bait restrictions were modified to allow the use of bait during the month of September.
- 4) The *Little Susitna River Coho Salmon Management Plan* (5 AAC 60.170) was modified. The escapement goal of 7,500 coho salmon was changed to an escapement range of 9,600–19,200 nonhatchery fish.

## 2000

- 1) The coho salmon bag and possession limits in the Knik Arm (excluding the stocked coho fishery in the Eklutna Tailrace) and the Susitna River were reduced to 2. The West Cook Inlet bag and possession limits north of the West Foreland were reduced to 2 daily and 4 in possession. South of the West Foreland they remained at 3 daily and 6 in possession.
- 2) Wasilla Creek, Jim Lake, Upper Jim Creek, and McRoberts Creeks were closed to coho salmon fishing.
- 3) After an angler harvested a limit of coho salmon from Fish or Cottonwood creeks, that angler could not fish that same day in Fish and Cottonwood creeks in waters open to salmon fishing.

## 2002

- 1) In the Larson Creek drainage, sport fishing for all salmon was closed year-round in streams upstream of a marker located one-quarter mile upstream from the mouth of Larson Creek.
- 2) In the Nancy Lake Creek drainage, all salmon fishing, including catch-and-release, was closed upstream of a marker located one-quarter mile upstream from the mouth of Nancy Lake Creek.
- 3) The Clearwater and Roscoe creek drainages were closed year-round to all fishing upstream from markers located one-half mile upstream of each of their confluences with the Chinitna River.

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**2002 (continued)**

- 4) The Fish Creek personal use fishery was opened by EO when the escapement goal was projected to be met.
- 5) Wasilla Creek was opened for salmon fishing (excluding Chinook salmon) from its mouth to the Alaska Railroad Bridge Saturday and Sunday only from 6:00 AM to 6:00 PM only.
- 6) The use of bait on Little Susitna River was eliminated July 14, upstream of the Little Susitna Public Use Facility.

**2005**

- 1) An angler was no longer permitted to fish in waters open to salmon fishing the same day that angler took a limit of salmon 16 inches or greater from Wasilla Creek.
- 2) Excluding Alexander Creek, the bag and possession limits for coho salmon on Westside Susitna streams was increased from 2 per day, 4 in possession to 3 per day, 6 in possession.
- 3) Anglers were no longer permitted to fish for “other salmon” (coho, pink, or chum salmon) 16 inches or less in waters closed to fishing for other salmon.

The BOF adopted the following commercial fishery regulations:

Central District Drift Gillnet Fishery Management Plan (5 AAC 21.353)

- 1) The drift fishery opens the third Monday in June or June 19, whichever is later.
- 2) From July 9 through July 15,
  - a) drift gillnet fishing is restricted for 2 regular fishing periods to the Kenai and Kasilof Sections and Drift Area One described below, and
  - b) in runs of over 2 million sockeye salmon to the Kenai River, there may be 1 additional 12-hour period in the Kenai and Kasilof Sections of the Upper Subdistrict and in Drift Area One.
- 3) From July 16 through July 31,
  - a) in runs of less than 2 million sockeye salmon to the Kenai River, there will be 2 regular 12-hour fishing periods restricted to the Kenai and Kasilof Sections of the Upper Subdistrict and Drift Area one;
  - b) in runs of between 2 and 4 million sockeye salmon to the Kenai River, there will be 2 regular 12-hour fishing periods restricted to the Kenai and Kasilof Sections of the Upper Subdistrict and in Drift Areas One and Two; and
  - c) in runs of over 4 million sockeye salmon to the Kenai River, there are no mandatory restrictions.

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**2005 (continued)**

- 4) From August 11 until closed by emergency order,
  - a) Drift Areas Three and Four are open for regular periods, and
  - b) Chinitna Bay may be opened by emergency order.

New drift fishing areas were as follows:

- 1) Drift Area One includes those waters of the Central District south of Kalgin Island at lat 60°20.43'N.
- 2) Drift Area Two includes those waters of the Central District enclosed by a line from lat 60°20.43'N, long 151°54.83'W to a point at lat 60°41.08'N, long 151°39.00'W to a point at lat 60°41.08'N, long 151°24.00'W to a point at lat 60°27.10'N, long 151°25.70'W to a point at lat 60°20.43'N, long 151°28.55'W.
- 3) Drift Area Three includes those waters of the Central District within 1 mile of mean lower low water (zero tide) south of a point on the West Foreland at lat 60°42.70'N, long 151°42.30'W.
- 4) Drift Area Four includes those waters of the Central District enclosed by a line from lat 60°04.70'N, long 152°34.74'W to the Kalgin Buoy at lat 60°04.70'N, long 152°09.90'W to a point at lat 59°46.15'N, long 152°18.62'W to a point on the western shore at lat 59°46.15'N, long 153°00.20'W, not including the waters of the Chinitna Bay Subdistrict.

Other commercial fishery regulatory changes included the following:

- 1) Up to 50 fathoms of the 150 fathoms of allowable drift gillnet gear per boat may be monofilament mesh, and monofilament gear must be registered with ADF&G prior to use.
- 2) Spotter planes were allowed during the fishing period.
- 3) The pink salmon fishery during even years was reauthorized; the mesh size restriction was removed.
- 4) Up to 35 fathoms of set gillnet gear per permit may be monofilament mesh with no more than 1 net per permit having monofilament mesh, and monofilament gear must be registered with ADF&G prior to use.

**2011**

- 1) In fresh water of Cook Inlet, a coho salmon removed from the water must be retained. No angler was permitted to remove a coho salmon from the water if it was intended for release.
- 2) The bag and possession limits for coho salmon were increased from 2 to 3 in streams of West Cook Inlet north of West Forelands to the Susitna River. Streams within in this area include Chuitna, Theodore, and Lewis rivers, and tributaries of the Beluga River.

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**2011 (continued)**

- 3) The bag and possession limits for coho salmon were increased from 2 to 3 in all streams within Units 3, 5, and 6 of the Susitna River drainage.
  - a) Talkeetna River streams (Unit 5) include Clear, Larson, and Prairie creeks.
  - b) Chulitna River streams (Unit 6) include Byers, Honolulu, and Troublesome creeks, and the East Fork Chulitna River.
  - c) Upper Susitna streams (Unit 3) include Indian and Portage creeks.
- 4) The *Central District Drift Gillnet Fishery Management Plan* was modified during the 2011 BOF meeting to include a preamble that the drift gillnet fishery was to managed to minimize the harvest of Northern District and Kenai River coho salmon in order to provide sport and guided sport fishermen a reasonable opportunity to harvest these salmon stocks over the entire run, as measured by the frequency of inriver restrictions. The expanded Kenai and Kasilof corridors were also created in 2011 and used as follows:
  - a) The drift fishery was to be opened the third Monday in June or June 19, whichever was later.
  - b) From July 9 through July 15,
    - i. fishing during the first regular period was restricted to the Expanded Kenai and Expanded Kasilof sections, and additional fishing time was restricted to these areas,
    - ii. fishing during the second regular fishing period was restricted to the Kenai and Kasilof sections of the Upper Subdistrict and Drift Area One, and
    - iii. at run strengths greater than 2.3 million, 1 additional fishing period could be allowed in the Kenai and Kasilof Sections of the Upper Subdistrict and Drift Gillnet Area One.
  - c) From July 16 through July 31,
    - i. at run strengths less than 2.3 million sockeye salmon to the Kenai River, fishing during 1 regular period was to be restricted to the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict and Drift Area One,
    - ii. at run strengths of 2.3–4.6 million sockeye salmon to the Kenai River, fishing during 1 regular 12-hour fishing period per week was to be restricted to either or both the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict or Drift Area One, and
    - iii. at run strengths greater than 4.6 million, there was to be no mandatory restrictions during regular fishing periods.
  - d) From August 16 until closed by emergency order, Drift Gillnet Areas Three and Four were to be open for fishing during regular fishing periods.
  - e) From August 11 through August 15, there were no mandatory area restrictions to regular periods, except that if the Upper Subdistrict set gillnet fishery was closed under 5 AAC 21.301(b)(2)(C)(iii), regular fishing periods would be restricted to Drift Gillnet Areas Three and Four.
- 5) The *Little Susitna River Coho Management Plan* (5 AAC 60.170) was repealed during the 2011 BOF.

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## **2014**

- 1) The third Saturday in August, from 6:00 AM to 6:00 PM, there was a youth-only fishery at the Eklunta Tailrace. The area open to fishing from the confluence with the Knik River upstream to the pedestrian bridge.
- 2) For Jim Creek, waters open to fishing were redefined to include all waters of Jim Creek downstream to the Knik River and continuing downstream on the Knik River to within 100 yards of the Knik River confluence with Bodenbug Creek. In these waters:
  - a) Sport fishing was closed on Mondays and Tuesdays from the second Saturday in August through December 31.
  - b) A person who took a bag limit of salmon could not fish for any species of fish in waters open to salmon fishing on that same day.
  - c) Leaf Lake and Mud Lake were added to the list of waters closed year-round to salmon fishing.

## **2017**

Fishing time was increased on the lower sections of Fish, Cottonwood, and Wasilla Creeks that are open to sport fishing for salmon. Fishing was allowed 5:00 AM–10:00 PM on these weekend-only fisheries, including the youth-only fishery at Fish Creek.

## **2018**

No new regulations.

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## **1989**

The BOF adopted a proposal to establish a bag limit of 10 per day, 10 in possession on northern pike in Susitna–West Cook Inlet Area.

## **1997**

- 1) Sport fishing for northern pike using 5 lines was allowed in specified lakes of the Susitna–West Cook Inlet Area provided the following was observed: hooks are single hooks with a gap between the point and shank no smaller than three-quarters inch, the lines are closely attended, and all species of fish other than northern pike are immediately released. Specified lakes include Alexander Lake, Sucker Lake, Trapper Lake, Flathorn Lake, Whiskey Lake, Hewitt Lake, Donkey Lake, Three Mile Lake (Beluga area), Neil Lake, Kroto Lake, and lakes of the Nancy Lake Recreation Area, excluding Nancy and Big No Luck Lake.
- 2) The 10-fish bag and possession limits on northern pike in the Susitna-West Cook Inlet Area were repealed.

## **1998**

- 1) A slot limit was established for northern pike in Alexander and Trapper lakes. No bag and possession limits were in effect for northern pike less than 22 inches in length. Retention of northern pike between 22 inches and 30 inches in length was not allowed. The bag and possession limits for northern pike 30 inches or greater in length were 1 per day and 1 in possession. Additionally, the action taken for Alexander and Trapper lakes reduced the number of lines allowed when fishing through the ice for northern pike from 5 lines to 2 lines, and prohibited the use of spears and bow and arrows for taking of northern pike.
- 2) The use of bow and arrow was allowed for taking northern pike in NCI waters.
- 3) The three-quarter-inch single-hook size restriction was eliminated when fishing through the ice on select northern Cook Inlet lakes where 5 lines were allowed.

## **2002**

The use of 5 lines while ice fishing for northern pike apply to 7 additional lakes in Northern Cook Inlet: Trapper Lake, Big No Luck Lake, Figure Eight Lake, Cabin Lake, Lower Vern Lake, Upper Vern Lake and Lockwood Lake. On Trapper Lake, there is no longer a “slot limit” for northern pike; bait, multiple hooks, spears, and bow and arrow gear are now allowed. For the purposes of sport fishing, legal bow and arrow gear includes crossbows. When fishing through the ice for northern pike, anglers may use 2 hooks on a single line, provided that both hooks are attached to 1 single piece of bait.

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## **2009**

The board met out-of-cycle in April 2009: the slot limit regulation on Alexander Lake was replaced with a size limit regulation. Under the new regulation, all northern pike less than 27 inches may be harvested without a bag or possession limit, whereas only 1 northern pike larger than 27 inches may be retained per day and in possession.

## **2011**

- 1) The BOF met in February 2011 and repealed the size limit for northern pike on Alexander Lake; no bag, possession, or size limit was imposed year round. Bow-and-arrow and spears to take northern pike were allowed as in other areas of NCI.
- 2) Anglers were allowed to fish for northern pike through the ice on Big and Nancy Lakes under the following specific guidelines:
  - a) Five lines are allowed from November 1 to March 15.
  - b) Fishing is only allowed 8:00 AM–5:00 PM. Current regulations for other species within these lakes did not change and anglers fishing for other species may fish outside hours designated for northern pike.
  - c) Hook gap must be at least three-quarters inch from point to shank.
  - d) Two single hooks are allowed per line so long as both hooks are attached to the same piece of bait.
  - e) A whole, legally recognized bait fish such as a herring or smelt must be used if fishing with bait.
  - f) Bait must be suspended above the bottom of the lake.
  - g) All lines must be closely attended.
  - h) All fish except northern pike must be immediately released unharmed.
- 3) In the Susitna River drainage, including all westside tributaries and waters of the eastside Susitna River north of Willow Creek, and in all West Cook Inlet area waters, northern pike were not allowed to be released back into the water alive. Further, anglers were allowed to choose to either discard dead northern pike in a responsible manner or harvest their catch.

**2012–2018** No changes affecting northern pike fisheries.

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### **1977**

- 1) Rainbow trout daily bag and possession limits are 10.
- 2) Talachulitna River became Alaska's first catch-and-release rainbow trout fishery. Only unbaited, single-hook lures are allowed.

### **1982**

Beginning in 1982, the daily bag and possession limits dropped to 5 rainbow trout of which only 2 could be 20 inches or more in length.

### **1983**

The daily bag and possession limits were further reduced to allow 5 fish of which only 1 could be 20 inches or more in length.

### **1985**

In Lake Creek (Yentna River) daily bag and possession limits were reduced to 2 and upstream of a marker 2 miles upstream of the mouth, only artificial lures were allowed.

### **1986**

During the fall of 1986, the BOF officially adopted the Cook Inlet and Copper River Rainbow/Steelhead Trout Management Policy. The BOF used this policy from 1986 to 1996 to implement regulations for rainbow trout within the NCIMA.

### **1987**

- 1) In the flowing waters of the Susitna River, Matanuska River, and West Cook Inlet drainages, only unbaited, artificial lures are allowed September 1 through December 31.
- 2) In the flowing waters of the Susitna River, Matanuska River, and West Cook Inlet daily bag and possession limits were reduced to 2 per day only 1 over 20 inches.
- 3) Anglers are required to record harvest of rainbow trout over 20 inches on harvest record card (back of license). Yearly limit of 2 rainbow trout over 20 inches.
- 4) Beginning in 1987, a major portion of the Eastside Susitna Management Unit was managed for trophy-size trout (trout over 20 inches). This fishery encompasses all drainages of the Susitna River from the junction of the Susitna and Talkeetna rivers upstream to Devils Canyon. Only 1 trout 20 inches or more in length is allowed daily with a 2 trout over 20 inches seasonal limit. Trout less than 20 inches must be released immediately. An unbaited, single-hook lure requirement complements this strategy.

### **1989**

- 1) Beginning in 1989, catch-and-release was initiated in the Lake Creek drainage one-quarter mile upstream of Bulchitna Lake, the Deshka River upstream of the confluence of Moose and Kroto creeks (The Forks), and the Fish Creek drainage located within the Talkeetna River drainage. Only unbaited, single-hook lures are allowed in these waters.

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**1989 (continued)**

- 2) Long (Kepler–Bradley), X, and Wishbone lakes designated catch-and-release only; unbaited, single hook, artificial lures only.

**1991**

- 1) In Lake Creek, only unbaited, artificial lures may be used August 15 through December 31 from an ADF&G marker 100 yards upstream of the mouth to an ADF&G marker one-quarter mile upstream of Bulchitna Lake.
- 2) The Talachulitna River catch-and-release area was extended to within three-quarter miles of the confluence of the Talachulitna River with the Skwentna River.

**1993**

- 1) In Big Lake, the rainbow trout bag limit was reduced to 2 daily and in possession.
- 2) In the upper Cook Inlet area, only 1 rainbow trout per day and 2 per season may be over 20 inches in length.
- 3) Long, X, and Wishbone lakes are closed to sport fishing from November 1 through April 30.
- 4) The North Fork of the Kashwitna River was established as a special management area for rainbow trout. Only single-hook, unbaited, artificial lures may be used in the North Fork of the Kashwitna River, and rainbow trout may not be possessed or retained; all rainbow trout caught must be released immediately.
- 5) Only unbaited, artificial lures may be used in all flowing waters of the Susitna–West Cook Inlet area (except when fishing for burbot when using legal gear for burbot) from September 1 through May 15, except in areas in which special regulations are in effect.
- 6) In the Lake Creek drainage, rainbow trout may not be possessed or retained in all flowing waters from August 15 through May 15, upstream from an ADF&G marker located approximately 100 yards upstream from its confluence with the Yentna River to an ADF&G marker located approximately one-quarter mile upstream from Bulchitna Lake. Only single-hook, unbaited, artificial lures may be used in this area during this time period. The Lake Creek drainage upstream from the Bulchitna Lake marker continues to be managed as a catch-and-release area for rainbow trout.

**1995**

Only unbaited artificial lures may be used in all flowing waters of the Susitna River drainage from September 1 through July 15.

**1996**

In November 1996 the BOF adopted the Criteria for Establishing Special Management for Trout, 5 ACC 75.013, to replace the Cook Inlet and Copper River Rainbow/Steelhead Trout Management Policy for use in instituting regulations. Bag and possession limits under this concept are 2 trout, of which only 1 may be 20 inches or more in length and also requires the use of unbaited artificial lures in all flowing waters from September 1 through May 15.

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**1997**

- 1) Rainbow trout may not be possessed or retained and only unbaited, single-hook, artificial lures may be used in all waters of the Prairie Creek drainage and within one-quarter mile of its confluence with the Talkeetna River.
- 2) Rainbow trout, Dolly Varden, whitefish, and Arctic grayling may not be possessed or retained in all waters of the Alexander Creek drainage and within one-quarter mile of its confluence with the Susitna River.
- 3) The retention of rainbow trout in the Willow Creek drainage and in all waters within one-half mile radius of its confluence with the Susitna River is prohibited. All rainbow trout caught in the Willow Creek drainage and within a one-half mile radius of its confluence with the Susitna River must be immediately released.
- 4) The retention of rainbow trout is prohibited in Montana Creek drainage and all waters within a one-half mile radius of its confluence with the Susitna River.
- 5) The bag and possession limits for rainbow trout in all flowing waters and nonstocked lakes of the Susitna West-Cook Inlet Area open to the retention of rainbow trout are 2 rainbow trout of which 1 may be over 20 inches in length, and the bag and possession limits in stocked lakes are 5 rainbow trout of which 1 may be over 20 inches in length. Stocked lakes are as follows: Barley, Bear Paw, Bench, Benka, Beverly, Big No Luck, Upper and Lower Bonnie, Bruce, B–J, Canoe, Carpenter, Christiansen, Coyote, Crystal, Dawn, Diamond, Echo, Farmer, Finger, Lalen, Little Lonely, Little No Luck, Loberg (Junction), Long (Glenn Highway MP 86), Loon, Lorraine, Lucille, Lynne, Marion, Matanuska, Meirs, Memory, Morvro, North Friend, Prator, Ravine, Reed, Rocky, Ruby, Seventeenmile, Seymour, Slipper, South Friend, South Rolly, Tigger, Twin Island, Vera, Victor, Visnaw, Walby, Weiner, West Sunshine, Willow, Wolf, and Y.
- 6) Only unbaited, single-hook, artificial lures may be used in all flowing waters of the Alexander Creek drainage upstream of an ADF&G regulatory marker located 400 yards upstream of the confluence of Trail Creek.
- 7) Unbaited, single-hook, artificial lures are required year-round upstream of the Parks Highway in Rabideux Creek, Montana Creek, Goose Creek, Caswell Creek, Kashwitna River, Grays Creek, Little Willow Creek, Sheep Creek, Willow Creek, and Little Susitna River, and upstream of a department regulatory marker in Birch Creek drainage, Sunshine Creek drainage, and upstream of the Petersville Road in Trapper Creek.
- 8) Only unbaited, single-hook, artificial lures may be used from September 1 through May 31 in all waters of the drainages described above (number 7 above) and in all waters within a one-half mile radius of their confluence with the Susitna River or the mouth of the Little Susitna River.

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**1997 (continued)**

- 9) Unbaited, single-hook, artificial lures are required year-round in the Willow Creek drainage upstream of an ADF&G marker located one-quarter mile upstream from its confluence with the Susitna River and in all waters of the Willow Creek drainage and within a one-half mile radius of its confluence with the Susitna River from September 1 through May 31.
- 10) Only unbaited, single-hook, artificial lures may be used year-round in Montana Creek upstream of the Parks Highway. Only unbaited, single-hook, artificial lures may be used in Montana Creek downstream of the Parks Highway and in all waters within a one-half mile radius of its confluence with the Susitna River from September 1 through May 31.

**1999**

- 1) Willow Creek went from no retention of rainbow trout to allowing the retention of 1 rainbow trout under 16 inches in length per day and in possession upstream of the Parks Highway bridge. The single-hook, unbaited, artificial lure provision for this area remains in effect. Downstream of the Parks Highway bridge, rainbow trout may still not be possessed or retained.
- 2) Anglers will be allowed to retain rainbow trout and use bait when fishing on the Willow Creek drainage lakes. The bag and possession limits in Shirley, Long, and Rainbow lakes are 2 per day and 2 in possession with only 1 over 20 inches in length. The bag and possession limits in Willow and Crystal lakes, which are stocked annually, are 5 per day and 5 in possession with only 1 over 20 inches in length. The seasonal limit of 2 rainbow trout greater than 20 inches applies to these and all other Cook Inlet waters.
- 3) Anglers will not be allowed to harvest rainbow trout from Canyon Creek (Skwentna River drainage). Additionally, only single-hook, unbaited, artificial lures may be used in Canyon Creek year-round.
- 4) Anglers will not be allowed to retain rainbow trout in flowing waters of West Cook Inlet and the Susitna River drainage from April 15 to June 14. This regulation applies to all flowing waters in these areas, including Willow Creek. This regulation provides for catch-and-release fishing for rainbow trout during this time period.
- 5) In Big Lake (Houston area) only unbaited, single hook, artificial lures may be used from November 1 through April 30.
- 6) On the Little Susitna River, anglers will be allowed to use treble hooks year-round downstream of the Parks Highway Bridge. Existing bait restrictions were modified to allow the use of bait during the month of September, aimed at salmon with small effect on rainbow trout fishing.

In **2000** and **2001** no changes were made affecting rainbow trout fisheries.

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## **2002**

The following regulations affecting rainbow trout were adopted by the BOF during the February 2002 meeting:

- 1) Beads are allowed fixed on line within 2 inches of fly, lure, or hook.
- 2) The single-hook regulation was clarified to mean 1 single hook.
- 3) In the East Fork of Chulitna, Theodore, and Lewis rivers, only 1 single-hook, unbaited artificial lure may be used January 1 through July 13. This regulation was made in conjunction with allowing a hook-and-release fishery for Chinook salmon.

At this time the majority of Cook Inlet rainbow trout fisheries are managed under a seasonal limit of 2 rainbow trout over 20 inches. To assure compliance with this regulation, anglers must, immediately upon harvesting a trout over 20 inches, record that harvest on the back of their license or on a harvest record.

In **2003** and **2004** no changes were made affecting rainbow trout fisheries.

## **2005**

In January 2005, the BOF increased the annual limit for rainbow trout caught in Northern Cook Inlet stocked lakes from 2 to 10 fish.

In **2006–2016** there were no changes affecting rainbow trout fisheries.

## **2017**

The BOF met and a regulation was repealed that closed sport fishing within 300 feet of Palmer-Fishhook Road. This area remains closed to fishing for salmon but is now open to fishing for other species June 15–April 14.

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**APPENDIX C: MANAGEMENT PLANS AND POLICIES  
THAT IMPACT NORTHERN COOK INLET  
MANAGEMENT AREA FISHERIES**

### **5 AAC 21.363. UPPER COOK INLET SALMON MANAGEMENT PLAN (UCISMP)**

UCISMP provides long-term direction to the Alaska Board of Fisheries for allocation and conservation of fisheries involving Upper Cook Inlet (UCI) salmon stocks. The plan defines UCI salmon stocks as those that move through the Northern and Central Districts and spawn in waters draining into those districts. Various “step down” management plans relate to the UCISMP and provide specific direction to fishery managers regarding user groups, time, area or species.

The UCISMP established the following provisions for the management and conservation of UCI salmon stocks:

- 1) Provide for a subsistence priority.
- 2) Harvest of UCI salmon will be governed by specific and comprehensive management plans.
- 3) In adopting these plans, the following will be considered: need for subsistence, protection of fisheries habitat, and the needs and demands of user groups.
- 4) The management plans may address the need to allocate harvestable surplus among commercial, sport, guided sport, and personal use fisheries and the need to allocate the harvestable surplus within user groups.
- 5) In the absence of a specific management plan, salmon shall be harvested in the fisheries that have historically harvested them.
- 6) In the absence of a specific management plan, the burden of conservation shall be shared among all user groups in close proportion to their respective harvest.

### **5 AAC 01.560. TYONEK SUBSISTENCE FISHERY**

The Tyonek Subsistence Fishery provides subsistence fishing opportunity primarily to residents of the village of Tyonek. Fish harvested in this fishery are bound for NCIMA. Specific fishing periods occur from May 15 through October 15. A harvest quota of 4,200 Chinook salmon was removed in 2011 and replaced with a bag and possession limit of 25 salmon for the head of a household and 10 salmon for each dependent of the permit holder. The amount necessary for subsistence (ANS) for this fishery is 2,700 Chinook salmon and 150–500 salmon other than Chinook salmon.

### **5 AAC 21.368. BIG RIVER SOCKEYE SALMON MANAGEMENT PLAN**

The *Big River Sockeye Salmon Management Plan* authorizes a harvest of Big River salmon by set gillnets in the Kustatan Subdistrict of the Central District. Sockeye salmon is the targeted species. This fishery extends from June 1 through June 24 on Monday, Wednesday, and Friday from 7:00 AM to 7:00 PM. It is subject to emergency closure when the incidental harvest of Chinook salmon exceeds 1,000 fish. At the 2005 BOF meeting, the plan was amended to expand fishing to a portion of the Kalgin Island Subdistrict along the western shore from Light Point to the Kalgin Island Light on the southern end of the island.

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## **5 ACC 21.353. CENTRAL DISTRICT DRIFT GILLNET FISHERY MANAGEMENT PLAN**

The *Central District Drift Gillnet Fishery Management Plan* was partitioned from the Northern District Salmon Management Plan during the 2005 BOF meeting. Management of the drift gillnet fishery is dependent on the run strength of sockeye salmon to the Kenai River. The plan was modified during the 2011, 2014, and 2017 BOF meetings to include a preamble that the drift gillnet fishery was to managed to minimize the harvest of Northern District and Kenai River coho salmon in order to provide sport and guided sport fishermen a reasonable opportunity to harvest these salmon stocks over the entire run, as measured by the frequency of inriver restrictions. The plan included the following:

- 1) The drift fishery opens the third Monday in June or June 19, whichever is later.
- 2) From July 9 through July 15,
  - i. Fishing during the first regular period and second period is restricted to the Expanded Kenai and Expanded Kasilof sections and Expanded Kasilof Section S of the Upper Subdistrict and Drift Gillnet Area 1.
  - ii. At run strengths greater than 2.3 million sockeye salmon, 1 additional fishing period may be allowed in the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict and Drift Gillnet Area One.
- 3) From July 16 through July 31,
  - i. At run strengths less than 2.3 million sockeye salmon to the Kenai River, fishing during all regular 12-hour fishing periods will be restricted to the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict.
  - ii. At run strengths of 2.3–4.6 million sockeye salmon to the Kenai River, fishing during 1 regular 12-hour fishing period per week will be restricted to either or both the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict or the Anchor Point Section of the Lower Subdistrict, or to Drift Gillnet Area 1. The remaining weekly 12-hour regular fishing period will be restricted to 1 or more of the following sections: Expanded Kenai Section, Expanded Kasilof Section, or Anchor Point Section.
  - iii. At run strengths greater than 4.6 million, 1 regular 12-hour fishing period per week will be restricted to the Expanded Kenai, Expanded Kasilof, and Anchor Point sections.
- 4) From August 1 to August 15, there are no mandatory area restrictions to regular fishing periods, except that if the Upper Subdistrict set gillnet fishery is closed under 5 AAC 21.301(b)(2)(C)(iii), or ADF&G determines that less than 1 percent of the season's total drift gillnet sockeye harvest has been taken per fishing period for 2 consecutive fishing periods in the drift gillnet fishery, regular fishing periods will be restricted to Drift Gillnet Areas 3 and 4.
- 5) From August 16 until closed by emergency order, Drift Gillnet Areas 3 and 4 are open for fishing during regular fishing periods.

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## **5 AAC 21.358. NORTHERN DISTRICT SALMON MANAGEMENT PLAN**

The *Northern District Salmon Management Plan* provides the following management guidelines:

- 1) Minimize the harvest of coho salmon bound for the Northern District of UCI and provides ADF&G direction for management of salmon stocks.
- 2) Manage the Northern District commercial salmon fisheries based on abundance of sockeye salmon counted through the weirs on Larson, Chelatna, and Judd lakes or other salmon indices.
- 3) From July 20 through August 6, if the ADF&G's assessment of abundance indicates that restrictions are necessary to achieve the escapement goal, the commissioner may, by emergency order, close the commercial set gillnet fishery in the Northern District and immediately reopen a season during which the number of set gillnets that may be used is limited to the following options selected at the discretion of the commissioner, except that from July 31 through August 6, the commissioner may allow the use of 2 set gillnets in that portion of the General District south of the Susitna River.
- 4) Manage the Northern District commercial salmon fisheries to minimize the incidental take of coho salmon stocks bound for the Northern District.
- 5) Personal use fishing with a set gillnet is prohibited in the Northern District.
- 6) Directs ADF&G to conduct habitat assessments to determine loss of riparian habitat by noncommercial fishermen.

## **5 AAC 21.354. COOK INLET PINK SALMON MANAGEMENT PLAN**

The *Cook Inlet Pink Salmon Management Plan* adopted in 2002 and amended in 2005 and 2011, provides for even year pink salmon returns to be managed primarily for commercial uses while minimizing the harvest of Northern District and Kenai River coho salmon stocks. A commercial pink salmon fishery is authorized if the sockeye salmon escapement goals in the Kenai and Kasilof rivers are being achieved and coho salmon run strength is sufficient to withstand additional harvest.

The first period will occur only if during the regular fishing periods from August 6 through August 10, the daily harvest of pink salmon exceeds 50,000 fish or the cumulative harvest is 100,000 or more pink salmon. The second pink salmon commercial fishing period will occur only if 50,000 or more pink salmon and no more than 2,500 coho salmon are harvested during the first pink salmon commercial fishing period.

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### **5 AAC 21.366. NORTHERN DISTRICT KING SALMON MANAGEMENT PLAN**

The *Northern District King Salmon Management Plan* was adopted in 1985 and amended in 2005, 2008, and 2011 by the BOF. This plan provides for the management of the commercial harvest of Chinook salmon in the Northern District as follows.

- 1) The season runs from the first Monday on or after May 25 through June 24 (4–5 periods depending on the calendar year).
- 2) Fishing periods were extended from 6 hours to 12 hours (7:00 AM to 7:00 PM) in 2005; periods occur on Mondays.
- 3) Harvest is capped at 12,500 Chinook salmon.
- 4) Set gillnets may not exceed 35 fathoms in length and 6 inches in mesh size.
- 5) No Commercial Fisheries Entry Commission (CFEC) permit holder may operate more than 1 set gillnet at a time.
- 6) No net shall be set within 1,200 feet of another.
- 7) No net shall be placed seaward of another.
- 8) From May 25 through June 24, the area from 1 mile south of the Theodore River to the Susitna River is open the second regular Monday only.
- 9) If the Theodore, Lewis, or Ivan River is closed to sport fishing, the area 1 mile south of the Theodore River to the Susitna River will be closed to commercial Chinook salmon fishing for the remainder of the season by emergency order.
- 10) If the Deshka River is closed to sport fishing, the commercial Chinook salmon fishery throughout the Northern District will close for the remainder of the season by emergency order.
- 11) If the Chuitna River is closed to sport fishing, the area from a point at the wood chip dock (located about 4.5 miles south of the Chuitna River) to the Susitna River will be closed to commercial Chinook salmon fishing by emergency order for the remainder of the season.

Note that although not directly part of this plan, the gear restriction (5 AAC 21.331[d][2]) of 2 nets from August 1 to August 10 was repealed during the January 2005 BOF meeting.

### **5 AAC 21.370. PACKERS CREEK SOCKEYE SALMON MANAGEMENT PLAN**

The *Packers Creek Sockeye Salmon Management Plan* directs ADF&G not to base commercial fishing time in the Kalgin Island Subdistrict on enhanced run strength of Packers Creek sockeye salmon. The plan limits extra fishing time to no more than 1 additional fishing period per week.

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**5 AAC 75.210. SPECIAL MANAGEMENT AREAS AND LIBERAL HARVEST OPPORTUNITIES FOR TROUT** (previously titled *Criteria for Establishing Special Management Areas for Trout*)

The *Special Management Areas and Liberal Harvest Opportunities for Trout* was adopted by the BOF in November 1996 from the Cook Inlet and Copper River Basin Rainbow–Steelhead Trout Management Policy. These criteria provide future BOF, ADF&G managers, and the sport fishing public with the following:

- 1) management policies and implementation directives for Cook Inlet rainbow and steelhead trout
- 2) a systematic approach to developing sport fishing regulations that includes a process for rational selection of waters for such special management as catch-and-release, trophy areas, and high yield fisheries.

The *Statewide Management Standards for Wild Trout* (5 AAC 75.220), effective November 2003, directs ADF&G to manage wild stocks of rainbow trout for optimal sustained yield, based on management objectives that maximize benefits of the fisheries while maintaining genetic diversity, biologically desirable size composition, and abundance levels of wild stock that do not require stocking for enhancement or supplementation.

Due to concerns over lack of stock status information and the potential for increased angler effort on wild stocks, the potential for loss of fishing opportunity, and the potential for over-exploitation, the BOF intends to manage wild rainbow trout stocks conservatively. Conservative management for areas of the state, other than Southeast Alaska, means bag and possession limits of 2 fish, of which only 1 may be 20 inches or greater in length with an annual limit of 2 fish 20 inches or greater in length. Note that no changes to NCI wild rainbow trout regulations were made during the 2005 BOF meeting with respect to statewide management standards because regulations within the NCIMA already complied with these standards.

**5 AAC 77.540. UPPER COOK INLET PERSONAL USE SALMON FISHERY MANAGEMENT PLAN**

The *Upper Cook Inlet Personal Use Salmon Fishery Management Plan* establishes time, area, methods and means for taking salmon for personal use. This plan first went into effect during the 1996 season. Salmon harvest opportunity was established to replace the harvest opportunity previously provided through the *Upper Cook Inlet Subsistence Salmon Management Plan*, which was repealed by the BOF in 1995. The plan provides for personal use dip net fisheries in the Kenai and Kasilof rivers, Fish Creek, and Beluga River. Limited personal use gillnet fishing opportunity is provided near the terminus of the Kasilof River. The personal use fishery at Fish Creek may open by emergency order from July 10 through July 31 if ADF&G projects the escapement of sockeye salmon will be more than 50,000 fish. The Beluga River fishery is for persons 60 years or older, and proxies are not authorized. This fishery is from July 10 to August 31.

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### **5 AAC 01.593. UPPER YENTNA RIVER SUBSISTENCE SALMON FISHERY**

The Upper Yentna River subsistence salmon fishery establishes a subsistence fish wheel fishery for salmon other than Chinook salmon in the Yentna River downstream of its confluence with the Skwentna River to the confluence of Martin Creek. This fishery was implemented as a personal use fishery during the 1996 and 1997 seasons. State Supreme Court and BOF action changed it to a subsistence fishery beginning in 1998. A harvest quota of 2,500 salmon, other than Chinook salmon, was removed in 2011 and replaced with bag and possession limits of 25 salmon for the head of a household and 10 salmon for each dependent of the permit holder. The ANS for this fishery is 400–700 salmon other than Chinook salmon. The season is from 15 July to 7 August.

### **OTHER SPECIES NOT COVERED BY MANAGEMENT PLANS**

Fisheries for other species not covered by the above management plans or policies are managed to assure sustained yield of the targeted fish stock while assuring the continued, and where possible, the expanded opportunity to participate in the fishery.

### **SUSITNA BASIN RECREATION RIVERS ACT**

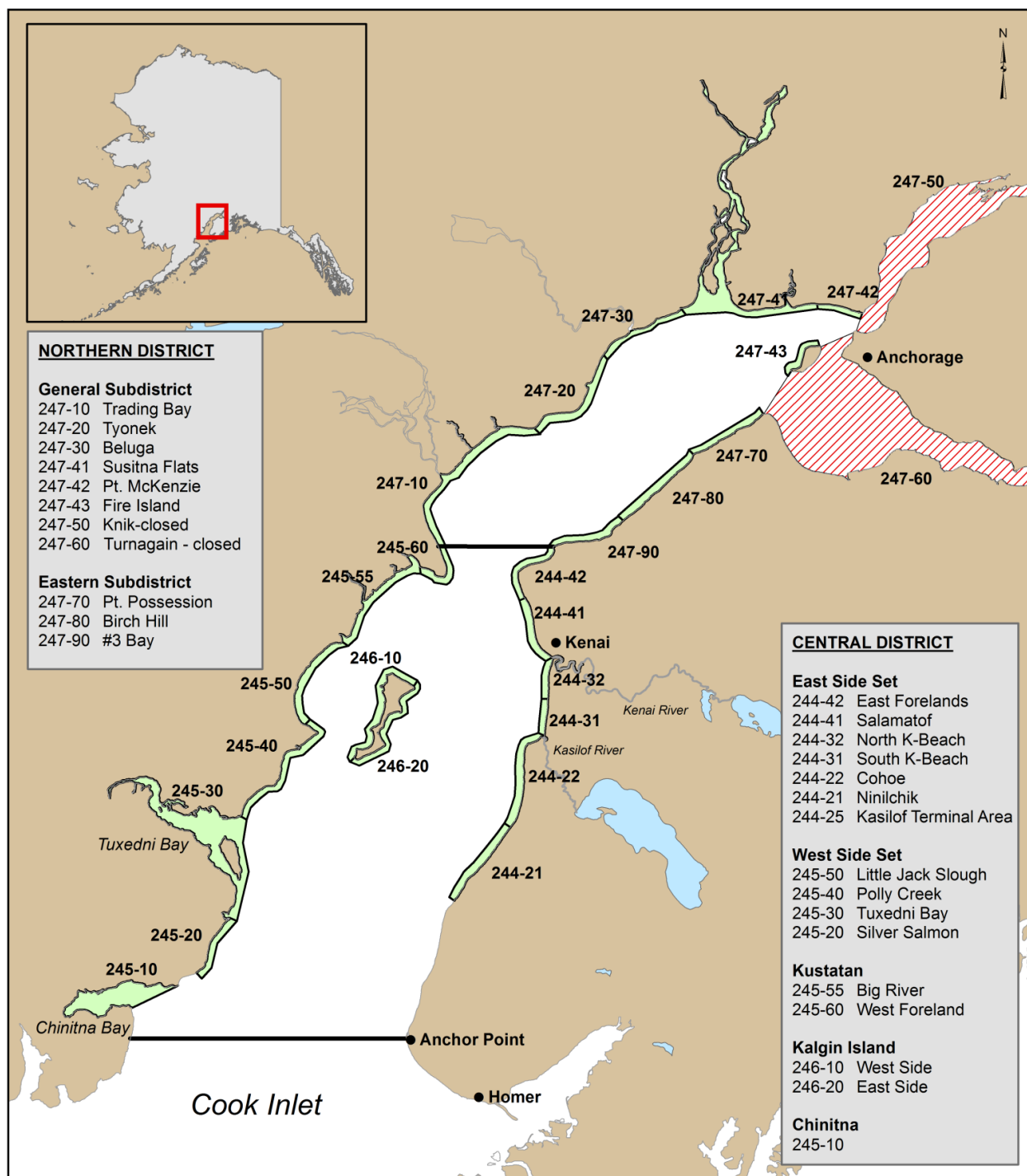
In the spring of 1988, the Alaska legislature passed the *Recreation Rivers Act* (Sec. 41.23.400) and assigned oversight responsibilities related to this act to the Alaska Department of Natural Resources (DNR). This act established 6 recreation rivers: Little Susitna River, Deshka River (including Moose and Kroto creeks), Talkeetna River, Lake Creek, Talachulitna River, and Alexander Creek. The legislation was enacted to ensure that all state lands and waters within the 6 river corridors are maintained and enhanced for recreation and wildlife purposes. A 2-year planning process was completed, which included input from affected individuals, groups, agencies, and officials throughout the area. The plan (DNR 1991) was adopted as DNR policy in the spring of 1991 following legislative review of the document. Regulations associated with the plan were available for public comment through January 7, 1994. Regulations went into effect for the 1996 season, but no funds have been allocated for enforcement.

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## **APPENDIX D: UPPER COOK INLET COMMERCIAL SALMON FISHERY**



Appendix D1.—Upper Cook Inlet commercial salmon fishing districts.

Appendix D2.—Upper Cook Inlet commercial salmon harvest from all Upper Cook Inlet districts, 1954–2017.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1954	63,780	1,207,046	321,525	2,189,207	510,068	4,291,626
1955	45,926	1,027,528	170,777	101,680	248,343	1,594,254
1956	64,977	1,258,789	198,189	1,595,375	782,051	3,899,381
1957	42,158	643,712	125,434	21,228	1,001,470	1,834,002
1958	22,727	477,392	239,765	1,648,548	471,697	2,860,129
1959	32,651	612,676	106,312	12,527	300,319	1,064,485
1960	27,512	923,314	311,461	1,411,605	659,997	3,333,889
1961	19,737	1,162,303	117,778	34,017	349,628	1,683,463
1962	20,210	1,147,573	350,324	2,711,689	970,582	5,200,378
1963	17,536	942,980	197,140	30,436	387,027	1,575,119
1964	4,531	970,055	452,654	3,231,961	1,079,084	5,738,285
1965	9,741	1,412,350	153,619	23,963	316,444	1,916,117
1966	8,544	1,852,114	289,837	2,005,745	532,756	4,688,996
1967	7,859	1,380,062	177,729	32,229	296,837	1,894,716
1968	4,536	1,104,896	468,160	2,276,993	1,107,903	4,962,488
1969	12,386	691,815	100,684	32,499	267,686	1,105,070
1970	8,336	732,605	275,399	814,895	776,229	2,607,464
1971	19,765	636,303	100,636	35,624	327,029	1,119,357
1972	16,086	879,824	80,933	628,574	630,103	2,235,520
1973	5,194	670,098	104,420	326,184	667,573	1,773,469
1974	6,596	497,185	200,125	483,730	396,840	1,584,476
1975	4,787	684,752	227,379	336,333	951,796	2,205,047
1976	10,865	1,664,150	208,695	1,256,728	469,802	3,610,240
1977	14,790	2,052,291	192,599	553,855	1,233,722	4,047,257
1978	17,299	2,621,421	219,193	1,688,442	571,779	5,118,134
1979	13,738	924,415	265,166	72,982	650,357	1,926,658
1980	13,798	1,573,597	271,418	1,786,430	389,675	4,034,918
1981	12,240	1,439,277	484,411	127,164	833,542	2,896,634
1982	20,870	3,259,864	793,937	790,648	1,433,866	6,299,185
1983	20,634	5,049,733	516,322	70,327	1,114,858	6,771,874
1984	10,062	2,106,714	449,993	617,452	680,726	3,864,947
1985	24,088	4,060,429	667,213	87,828	772,849	5,612,407
1986	39,256	4,792,072	757,353	1,300,958	1,134,817	8,024,456
1987	39,440	9,469,248	449,750	109,389	349,150	10,416,977
1988	29,080	6,843,833	561,048	471,080	710,615	8,615,656
1989	26,738	5,011,159	339,931	67,443	122,051	5,567,322
1990	16,105	3,604,710	501,739	603,630	351,197	5,077,381
1991	13,542	2,178,797	426,498	14,663	280,230	2,913,730
1992	17,171	9,108,353	468,930	695,861	274,303	10,564,618
1993	18,871	4,755,344	306,882	100,934	122,770	5,304,801
1994	19,962	3,565,609	583,793	523,434	303,177	4,995,975
1995	17,893	2,952,096	447,130	133,578	529,428	4,080,125
1996	14,306	3,888,922	321,668	242,911	156,520	4,624,327
1997	13,292	4,176,995	152,408	70,945	103,036	4,516,676
1998	8,124	1,219,517	160,688	551,737	95,704	2,035,770

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Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1999	14,383	2,680,518	126,105	16,176	174,554	3,011,736
2000	7,350	1,322,482	236,871	146,482	127,069	1,840,254
2001	9,295	1,826,851	113,311	72,560	84,494	2,106,511
2002	12,714	2,773,118	246,281	446,960	237,949	3,717,022
2003	18,503	3,476,161	101,756	48,789	120,767	3,765,976
2004	26,922	4,927,084	311,058	357,939	146,165	5,769,168
2005	27,667	5,238,699	224,657	48,419	69,740	5,609,182
2006	18,029	2,192,730	177,853	404,111	64,033	2,856,756
2007	17,625	3,316,779	177,339	147,020	77,240	3,736,003
2008	13,333	2,380,135	171,869	169,368	50,315	2,785,020
2009	8,750	2,045,794	153,210	214,321	82,808	2,504,883
2010	9,900	2,828,342	207,350	292,706	228,863	3,567,161
2011	11,248	5,277,995	95,291	34,123	129,407	5,548,064
2012	2,527	3,133,839	106,775	469,598	269,733	3,982,472
2013	5,398	2,683,224	260,963	48,275	139,365	3,137,225
2014	4,660	2,343,529	137,376	642,879	116,093	3,244,537
2015	10,798	2,649,667	216,032	48,004	275,960	3,200,461
2016	10,027	2,396,943	147,495	382,468	123,679	3,060,612
Average						
1954–2016	17,887	2,551,235	278,232	570,058	448,157	3,865,569
2012–2016	6,682	2,641,440	173,728	318,245	184,966	3,325,061
2017	7,369	1,838,110	293,811	168,042	239,425	2,546,757

*Source:* 1954–1965 from Fox and Shields (2004); 1966–2015 from Shields and Dupuis (2013-2016); 2016–2017 from Shields and Frothingham (2018).

*Note:* Catch statistics prior to 2006 reflect minor adjustments to harvest database.

## **APPENDIX E: ACCESS PROJECTS**

### **Boating Projects**

- 1) Signage identifying public access on an as-needed basis and also providing small road, trail, and site maintenance on an as-needed basis.
- 2) Susitna Landing Facility Operations: Presently Joe and Marilyn Rouswell (J & M's Boat Launch & RV Park) are under contract as the concessionaire and are responsible for the operation and maintenance of the Susitna Landing Boat Launch Facility. Recent improvements to the facility included tree removal and an upgraded septic system. In addition, road, parking lot area, and camping pad improvements (grading and fill repairs) were made throughout camping loops A, B, and C.
- 3) Talkeetna Boat Launch Facility Operations and Dredging Project: Presently Aaron Benjamin is under contract as the concessionaire and is responsible for the operation and maintenance of the Talkeetna Boat Launch Facility. Recent improvements included dredging of the ADF&G boat launch and side-channel area (feeds water into the boat launch) in order to provide sufficient water for operation and safe boat navigation.
- 4) Little Susitna Public Use Facility Operations (LSPUF): ADF&G provides funding via a reimbursable services agreement out of Head Quarters Access Maintenance Budget and facility revenue receipts to the Department of Natural Resources (DNR) Division of Parks and Outdoor Recreation (DPOR) to operate and maintain of the facility under ADF&G management. Recent improvements include the acquisition of a mobile RV camper trailer to provide annual, seasonal housing for the resident camp host (caretakers) at the LSPUF. Hopefully, provided housing will help attract a caretaker to the facility and will ensure continued high quality facility maintenance and operations at this ADF&G-owned site.

### **Boating and Nonboating Projects**

- 1) Nonboating improvement projects, both small developmental projects and (or) capital improvement projects were conducted at several sport fishing access sites within the region including Eklutna Tailrace (road and parking lot repair, and vault latrine), Caswell, Deception, and Sheep creeks (parking lot and road repair, and small access maintenance), Little Susitna Public Use Facility (fishing access trail repairs, Americans with Disabilities Act (ADA) fishing platform, and remote campsite stairwell installation and repair); Meir lake (parking lot and road repair).
- 2) Boating Improvement projects, both small developmental projects and (or) capital improvement projects, were conducted at numerous sites within the region including Susitna and Talkeetna rivers boat launch facilities (dredging and parking lot repairs) and Bonnie Lake (launch, parking lot and road repair).

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### **Annual Small Access Maintenance**

- 1) LSPUF Operations and Maintenance Contract (~\$136,000 FY18): Provide funds via RSA out of HQ Access Maintenance Budget and revenue receipts to DPOR to operate and manage the facility.
  - 2) Grounds Cleaning and Refuse Service (~\$25,500 FY18): Service for Sheep and Caswell creeks, Bonnie Lake, and Eklutna Tailrace.
  - 3) Toilet Service, Portable and Vault Service (\$7,500 FY18): Caswell (\$1,960) and Sheep (\$360) creeks, Eklutna tailrace (\$3,900), Talkeetna River (\$380), Susitna Landing (\$540), and Bonnie Lake (\$360).
  - 4) Installation of public access and stocked lake signage: An ADF&G Technician continues to do an excellent job posting and maintaining signs. Many signs were repaired and posted throughout this period, including signage at Caswell Creek and Sheep Creek angler access sites, Little Susitna Public Use Facility, Susitna Landing, Talkeetna Landing, the Eklutna Tail Race and Fish Creek. Sign work was also completed at Anderson, Barley, Bonnie, Diamond, Horseshoe (Knik Goose-Bay Area), Ida, Kalmbach, King, Knik, Knob, Lucille, Meirs, and Ravine lakes, which helped direct the public and mitigate landowner trespass concerns.
  - 5) Land Disputes: Land and access research were conducted on numerous angler access sites and public lake easements including Anderson, Beverly, Bonnie, Butterfly, Crooked, Echo, Flat, Honey Bee, Horseshoe (Big Lake area), Island, King, Knik, Kelper, Loberg, Loon, Lynn, Mirror, Mud, Twin Island, Vera and Zero lakes. Additional sites where land status and (or) legal access was investigated included Cottonwood, Sunshine, Kashwitna, Susitna, and Talkeetna Rivers.
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Appendix E2.—Completed access projects for Northern Cook Inlet Management Area, FY2018.

Nonboating projects			
Location	Project	Cost	Completed
1. Maintenance of existing SF angler access sites.	Toilets, waste/refuse removal, cleaning services, road grading and repairs, signage, and miscellaneous repairs.	\$50,000.00	Seasonal (May–Sept)
2. Legal Access Research	Completed access research and resolved issues at multiple sites including in-field work investigating/defining legal access easements, e.g. historical trails verses granted/dedicated access etc.	\$0.00	2015–2016
		<b>TOTAL</b>	<b>\$50,000.00</b>
Boating projects			
Location	Project	Cost	Completed
1. Maintenance of existing SF boating access sites.	Toilets, waste removal, cleaning services, dredging, road grading and repairs, signage, and miscellaneous repairs.	\$7,000.00	Seasonal (May–Sept)
2. Talkeetna maintenance dredge.	Dredge boat launch area to provide sufficient water for operation and safe boat navigation.	\$5,000.00	
3. LSPUF operations.	Funded DPOR for FY18 maintenance and operations.	\$136,000.00	
4. Susitna Landing Operation and Maintenance	Annual maintenance CIP grant to provide funding for construction of small development projects to provide a safer and more secure site. Funding will also be used for payment of the on-site private concessionaire, who is salaried from this grant, for the operation and maintenance (O&M) of this ADF&G-owned facility. Recent improvements to the facility included tree removal and an upgraded septic system. In addition, road, parking lot area, and camping pad improvements (grading/fill repairs) were made throughout camping loops A, B and C.	\$60,000.00	
		<b>TOTAL</b>	<b>\$213,000.00</b>

*Note:* AWT = Alaska Wildlife Troopers; CIP = Capital Improvement Project; DNR DPOR = Department of Natural Resources Division of Parks and Outdoor Recreation; LSPUF = Little Susitna Public Use Facility; SF = Division of Sport Fish; SRS = State Recreation Site.



Appendix E3.—Proposed access projects for Northern Cook Inlet Management Area in FY2019.

Nonboating				
Location	Project <sup>a</sup>	Estimated cost	Funding year	
1. Region II Small Access Maintenance	Site maintenance contracts, signage, road grading & repair, and miscellaneous repair.	\$75,000.00	SAM Yearly	
2. Sheep Creek Stairwell Renovation and Vault Latrine Replacement.	Cooperative project with DPOR with ADF&G for the removal/replacement of existing vault latrines and renovation of trail.	\$500,000.00	Proposed regional funding commitment	
TOTAL		\$575,000.00		
Boating projects <sup>a</sup>				
Location	Project <sup>a</sup>	Estimated cost	Funding year	
1. Region II Small Access Maintenance	Road and site maintenance and annual dredge work.	\$5,000.00	SAM Yearly	
2. Little Susitna River Public Use Facility	RSA to fund DNR DPOR for LSPUF operation.	\$151,000.00	SAM Yearly	
3. Stocked and Wild lakes	Conduct access site surveys.	\$5,000.00	SAM	
4. Susitna Landing O&M and Small Development Project (CIP)	This project is to provide for continued high quality facility maintenance and operations of the Susitna Landing Boat Launch Facility by utilizing a private concessionaire (Joe Rouswell) salaried from this grant to staff and manage the facility. The project would also provide for construction of small development projects to provide a safer and secure facility.	\$85,000.00	SAM Yearly	
5. Finger Lake Boat Launch Facility Renovation Project (CIP)	Cooperative project with the Alaska Department of Fish and Game (ADF&G) & Department of Parks and Outdoor Recreation (DPOR) for renovation of the boat launch ramp toe area to address scouring issues.	\$120,000.00		
TOTAL		\$243,000.00		

<sup>a</sup> Completed access projects are listed in Appendix E2.

<sup>b</sup> CIP = capital improvement project; DNR = Division of Natural Resources; MLW = Division of Mining, Land, and Water; DPOR = Division of Parks and Outdoor Recreation; FY = fiscal year; SF = Division of Sport Fish; LSPUF = Little Susitna Public Use Facility; MHTLO = State of Alaska Mental Health Trust Land Office; MSB = Matanuska-Susitna Borough; RSA = reimbursable service agreement; SAM = small access maintenance; SRA = State Recreation Area (managed by DPOR).

<sup>c</sup> Reimbursable service agreement (RSA) amount fluctuates year-to-year depending on revenue receipt income received.



## **APPENDIX F: INFORMATION AND EDUCATION PROGRAM**

Appendix F1.—Classroom visits and presentations conducted for ADF&G Information and Education Program, 2017.

Date	School	Number of students	Age group	Subject
26 Sep	District Wide	504	Elementary	Egg Takes
27 Sep	District Wide	438	Elementary	Egg Takes
1 Nov	Sherrod	150	Elementary	Watershed
2 Nov	Knik	85	Elementary	Dissection
2 Nov	Larson	50	Elementary	Dissection
3 Nov	Denaina	75	Elementary	Dissection
3 Nov	Tanaina	70	Elementary	Dissection
6 Nov	Knik	85	Elementary	Watershed
6 Nov	Machentaz	75	Elementary	Watershed
7 Nov	Finger Lake	60	Elementary	Watershed
7 Nov	Machentaz	75	Elementary	Dissection
13 Nov	Swanson	150	Elementary	Watershed
13 Nov	Larson	50	Elementary	Watershed
14 Nov	Snowshoe	70	Elementary	Dissection
15 Nov	Cottonwood Creek	90	Elementary	Watershed
15 Nov	Butte	50	Elementary	Dissection
16 Nov	Louse Farm	12	Elementary	Watershed
17 Nov	Teeland	90	Elementary	Dissection
20 Nov	Snowshoe	70	Elementary	Watershed
20 Nov	Butte	50	Elementary	Watershed
21 Nov	Cottonwood Creek	90	Elementary	Dissection
21 Nov	Meadow Lakes	70	Elementary	Dissection
22 Nov	Finger Lake	60	Elementary	Dissection
22 Nov	Sherrod	150	Elementary	Dissection
27 Nov	Denaina	75	Elementary	Watershed
27 Nov	Meadow Lakes	70	Elementary	Watershed
28 Nov	Talkeetna	20	Elementary	watershed/dissection
1 Dec	Tanaina	70	Elementary	Watershed
1 Dec	Big lake	80	Elementary	Dissection
4 Dec	Midnight Sun	50	Elementary	Watershed
5 Dec	Big lake	80	Elementary	Watershed
5 Dec	Pioneer Peak	80	Elementary	Dissection
6 Dec	Willow	54	Elementary	Dissection
7 Dec	Shaw	60	Elementary	Dissection
Total		3,308		

Appendix F2.—Classroom visits and presentations conducted for ADF&G Information and Education Program, 2018.

Date	School	Number of students	Age group	Subject
1 Oct	District Wide	467	Elementary	Egg Takes
2 Oct	District Wide	545	Elementary	Egg Takes
3 Oct	Sherrod	150	Elementary	Dissection
4 Oct	Knik	85	Elementary	Dissection
5 Oct	Larson	75	Elementary	watershed
9 Oct	Meadow Lakes	50	Elementary	watershed
11 Oct	Finger Lake	70	Elementary	watershed
12 Oct	Knik	85	Elementary	watershed
15 Oct	Machentaz	75	Elementary	watershed
15 Oct	Finger Lake	60	Elementary	dissection
16 Oct	Machentaz	75	Elementary	Dissection
17 Oct	Pioneer Peak	150	Elementary	Dissection
18 Oct	Willow	50	Elementary	Dissection
18 Oct	Shaw	70	Elementary	Dissection
19 Oct	Cottonwood Creek	90	Elementary	watershed
19 Oct	Butte	50	Elementary	watershed
22 Oct	Louse Farm	12	Elementary	Dissection
23 Oct	Teeland	90	Middle	Dissection
25 Oct	Snowshoe	70	Elementary	watershed
26 Oct	Butte	50	Elementary	Dissection
29 Oct	Cottonwood Creek	90	Elementary	Dissection
30 Oct	Denaina	70	Elementary	watershed
30 Oct	Tanaina	60	Elementary	watershed
1 Nov	Sherrod	150	Elementary	Watershed
2 Nov	Denaina	75	Elementary	Dissection
5 Nov	Meadow Lakes	70	Elementary	dissection
6 Nov	Talkeetna	20	Elementary	Dissection
7 Nov	Tanaina	70	Elementary	Dissection
8 Nov	Big lake	80	Elementary	Dissection
9 Nov	Midnight Sun	50	Elementary	Dissection
13 Nov	Big lake	45	Elementary	watershed
14 Nov	Swanson	150	Elementary	Dissection
15 Nov	Larson	54	Elementary	dissection
15 Nov	Snowshoe	60	Elementary	Dissection
Total		3,413		



## **APPENDIX G: EMERGENCY ORDERS**

**1994**

- 1) EO 2-RS-2-28-94 opened the Fish Creek personal use fishery. The dip net fishery opened 9:00 AM on July 27 and closed midnight on August 5, except the fishery was closed July 29 and August 2.
- 2) EO 2-RS-2-33-94 superseded EO 2-RS-2-28-94, extending the Fish Creek personal use dip net fishery through midnight August 9, effective August 7–9.
- 3) EO 2-KS-2-05-94 closed to fishing that portion of the Little Susitna River from the ADF&G fish counting weir located at river mile 32.5 downstream for a distance of 1,500 feet, effective May 25 through September 15.
- 4) EO 2-SS-2-32-94 increased the bag and possession limits to 5 coho salmon at the Little Susitna River downstream from the ADF&G counting weir at river mile 32.5, effective August 6 through December 31.
- 5) EO 2-SS-2-29-94 closed that portion of Jim Creek to fishing from the ADF&G fish counting weir located at river mile 1 downstream for a distance of 1,000 feet, effective July 26 through November 1.
- 6) EO 2-KS-2-02-94 reduced the Chinook salmon possession limit to 1 fish and eliminated the use of bait in the Deshka River, effective May 1 through July 13.
- 7) EO 2-KS-2-13-94 closed all waters of the Deshka River drainage to sport fishing for Chinook salmon and prohibited the use of bait in the following waters of the Susitna River drainage: 1) all waters of the Susitna River drainage downstream of the Deshka River that flow into the Susitna River from the east and the Alexander Creek drainage, 2) all waters of the Yentna River drainage, 3) all waters of the Talkeetna River drainage, and 4) all waters of the Chulitna River drainage, effective June 17 through July 13.

**1995**

- 1) EO 2-KS-2-07-95 closed to fishing that portion of the Little Susitna River from the fish counting weir located at river mile 32.5 downstream for a distance of 1,900 feet, effective May 25 through September 15.
- 2) EO 2-KS-2-08-95 established a possession limit of 1 Chinook salmon 16 inches or more in length in the Little Susitna River, effective May 24 through September 15.
- 3) EO 2-KS-2-21-95 opened Willow Creek from its mouth upstream to the Parks Highway Bridge and all waters within a one-quarter mile radius of Willow Creek's confluence with the Susitna River to Chinook salmon fishing, effective 12:01 AM through midnight on Tuesday, July 4.

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**1995 continued**

- 4) EO 2-RS-02-32-95 opened the Fish Creek personal use fishery. The dip net fishery opened 5:00 AM on 26 July and closed midnight on 8 August, except the fishery was closed July 28, August 1, and August 4.
- 5) EO 2-SS-02-40-95 increased the bag and possession limits to 5 coho salmon at the Little Susitna River downstream from the ADF&G fish counting weir at river mile 32.5, effective August 9 through December 31.

**1996**

- 1) EO 2-KS-2-27-96 opened Willow, Little Willow, Sheep, and Montana creeks from their mouths upstream to the Parks Highway Bridge and all waters within a one-quarter mile radius of their confluence with the Susitna River to Chinook salmon fishing effective 12:01 AM on Thursday, July 4, through midnight Sunday, July 7.

**1997**

- 1) EO 2-KS-2-15-97 opened the Deshka River from the mouth to approximately 2 miles upstream and within a one-quarter mile radius of the Susitna River confluence to fishing for Chinook salmon over 16 inches in length from 6:00 AM through 11:00 PM daily through July 13.
- 2) EO 2-KS-2-18-97 opened eastside Susitna River streams to Chinook salmon fishing on July 4.
- 3) EO 2-RS-2-25-97 closed Fish Creek to dipnetting from 11:00 AM on July 23 through 11:00 PM on July 25.
- 4) EO 2-RS-2-28-97 closed Fish Creek to dipnetting for the remainder of the 1997 season on July 26.
- 5) EO 2-SS-02-31-97 prohibited use of bait and reduced daily bag and possession limits of coho salmon to 1 in all waters of Cook Inlet on August 9. Areas not included were Eklutna Tailrace, and Ship, Bird, and Campbell creeks.
- 6) EO 2-SS-2-34-97 closed Wasilla Creek downstream from the railroad bridge, including Rabbit Slough and Spring Creek, to sport fishing, August 23 through October 31.

**1998**

- 1) EO 2-KS-2-08-98 established for the Deshka River that upon harvesting a Chinook salmon 16 inches or more in length, an angler must quit fishing for Chinook salmon for the remainder of the day. This clarified a regulation that went into effect when the Deshka River was opened to Chinook salmon fishing for the 1998 season.
- 2) EO 2-KS-2-09-98 opened Willow Creek to Chinook salmon fishing June 20–22.

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**1998 (continued)**

- 3) EO 2-KS-2-12-98 added Friday, July 3, as a day open to Chinook salmon fishing in that portion of the Susitna River drainage upstream from its confluence with the Deshka River to its confluence with the Talkeetna River including Susitna River tributaries from Willow Creek to Trapper Creek.
- 4) EO 2-KS-2-14-98 closed the Deshka River to all fishing 1,200 feet downstream and 300 feet upstream of the ADF&G fish counting weir.
- 5) EO 2-RS-2-15-98 closed Fish Creek to dipnetting, effective July 25–31.

**1999**

- 1) EO 2-KS-2-05-99 closed the Deshka River to fishing from 1,000 yards downstream to 200 yards upstream of the ADF&G fish counting weir.
- 2) EO 2-KS-2-07-99 allowed the use of bait in the first 17 miles of the Deshka River and within a one-quarter mile radius of the mouth of the Deshka River with the Susitna River, June 22 through July 13.
- 3) EO 2-KS-2-11-99 opened Willow, Little Willow, Sheep, and Montana creeks to Chinook salmon fishing for an additional weekend, July 10 through July 12.
- 4) EO 2-RS-2-15-99 closed Fish Creek to dipnetting on July 26.
- 5) EO 2-SS-2-20-99 reduced the bag limit to 1 coho salmon and no bait for Cottonwood, Wasilla, and Fish creeks, and the Little Susitna River on August 19.

**2000**

- 1) EO 2-KS-2-04-00 closed the Deshka River to fishing from 1,000 yards downstream to 200 yards upstream of the ADF&G fish counting weir.
- 2) EO 2-KS-2-05-00 allowed the use of bait in the first 17 miles of the Deshka River and within a one-quarter mile radius of the mouth of the Deshka River with the Susitna River, June 8 through July 13.
- 3) EO 2-KS-2-11-00 opened Willow, Little Willow, Sheep, and Montana creeks to Chinook salmon fishing for an additional day on July 4.
- 4) EO 2-KS-2-12-00 opened the east fork of the Chulitna River, and Willow, Little Willow, Sheep, and Montana creeks to Chinook salmon fishing for an additional 3-day weekend, July 8 through July 10.
- 5) EO 2-SS-2-17-00 established for waters below river mile 32.5 of the Little Susitna River that after keeping 2 coho salmon, an angler must quit fishing in the Little Susitna River for the remainder of the day, July 28 through December 31.
- 6) EO 2-RS-2-16-00 closed Fish Creek to dipnetting on July 26.

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## **2001**

- 1) EO 2-KS-2-03-01 closed the Deshka River to fishing from 1,000 yards downstream to 200 yards upstream of the ADF&G fish counting weir.
- 2) EO 2-KS-2-04-01 allowed the use of bait in the first 17 miles of the Deshka River and within a one-quarter mile radius of the mouth of the Deshka River with the Susitna River, June 12 through July 13.
- 3) EO 2-KS-2-09-01 extended Chinook salmon fishing on the Chulitna River downstream of the cable crossing July 1 through July 5.
- 4) EO 2-KS-2-13-01 opened Willow Creek to Chinook salmon fishing on June 29 at 12:01 AM.
- 5) EO 2-KS-2-15-01 extended the Chinook salmon season in the Susitna River drainage upstream from its confluence with the Deshka River to its confluence with the Talkeetna River, including the Susitna River tributaries from Willow Creek to Trapper Creek and the east fork of the Chulitna River (including the first one-quarter mile of Honolulu Creek only). These waters, which were scheduled to close on Monday, July 2, were opened through Wednesday, July 4, at 12:00 midnight.
- 6) EO 2-RS-2-17-01 closed Fish Creek to dipnetting on July 12 at 11:00 PM.

## **2002**

- 1) EO 2-KS-2-03-02 increased the possession limit to 2 Chinook salmon in all Westside Susitna River tributaries except Alexander Creek.
- 2) EO 2-KS-2-02-02 opened the entire Theodore and Lewis rivers to catch-and-release for Chinook salmon through 30 June, limited to single hook, no bait.
- 3) EO 2-KS-2-04-02 closed the Deshka River to fishing from 1,000 yards downstream to 200 yards upstream of the ADF&G fish counting weir.
- 4) EO 2-KS-2-05-02 allowed the use of bait in the first 17 miles of the Deshka River and within a one-quarter mile radius of the mouth of the Deshka River with the Susitna River, June 8 through July 13.
- 5) EO 2-KS-2-17-02 extended the Chinook salmon season in Willow, Sheep, and Montana creeks 3 days from July 5 to July 7, 6:00 AM to 11:00 PM, daily.
- 6) EO 2-SS-2-29-02 increased the coho salmon bag limit in Fish Creek to 3 per day and allowed 24-hour per day fishing on Saturdays and Sundays, beginning August 17 at 12:01 AM through December 31.

## **2003**

- 1) EO 2-KS-2-01-03 closed the Deshka River to fishing from 1,000 yards downstream to 200 yards upstream of the ADF&G fish counting weir.

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**2003 (continued)**

- 2) EO 2-KS-2-05-03 increased the bag and possession limits of Chinook salmon greater than 20 inches in the Deshka River from 1 per day and 2 in possession to 2 per day and 4 in possession.
- 3) EO 2-KS-2-07-03 rescinded EO 2-KS-2-01-03.
- 4) EO 2-KS-2-12-03 extended the Chinook salmon season in Willow, Sheep, and Montana creeks 3 days from July 4–6, 6:00 AM to 11:00 PM, daily.

**2004**

- 1) EO 2-RS-2-18-04 prohibited the retention of sockeye salmon while sport fishing in all waters of the Yentna River drainage, beginning August 4.
- 2) EO 2-KS-2-06-04 increased the daily bag and possession limits for Chinook salmon on the Deshka River from 1 per day, 2 in possession to 2 per day, 4 in possession, June 12 to July 13.
- 3) EO 2-KS-2-04-04 allowed use of bait in that portion of the Deshka River open to Chinook salmon fishing, beginning May 28.
- 4) EO 2-KS-2-01-04 opened Eklutna Tailrace to Chinook salmon fishing on April 15.

**2005**

- 1) EO 2-RS-2-27-05 prohibited the retention of sockeye salmon in that portion of Fish Creek open to salmon fishing, beginning August 13.
- 2) EO 2-RS-26-05 prohibited the retention of sockeye salmon while sport fishing in all waters of the Susitna River drainage, effective July 24.
- 3) EO 2-KS-2-21-05 extended the Chinook salmon season in the lower 2 miles of the Deshka River from July 14 to July 31.
- 4) EO 2-KS-2-03-05 increased the daily bag and possession limits for Chinook salmon on the Deshka River to 2 per day, 4 in possession, and increased fishing time to 24 hours per day, May 27 to July 13.

**2006**

- 1) EO 2-KS-2-07-06 increased the daily bag and possession limits for Chinook salmon on the Deshka River to 2 per day, 4 in possession, and increased fishing time to 24 hours per day, May 26 to July 13.
- 2) EO 2-SS-2-41-06 increased the daily bag limit of coho salmon to 3 daily in that portion of the Little Susitna River open to salmon fishing, beginning August 19.
- 3) EO 2-SS-2-44-06 increased the period open to salmon fishing on Wasilla Creek to 24 hours per day while keeping the Saturday, Sunday, and weekend only restriction, and increased the bag limit for coho salmon to 3 daily in those waters open to salmon fishing, beginning August 19.

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**2006 (continued)**

- 4) EO 2-SS-43-06 increased the period open to salmon (other than Chinook salmon) fishing on Fish Creek to 24 hours per day while keeping the Saturday, Sunday, and weekend only restriction, and increased the bag limit for coho salmon to 3 daily in those waters open to salmon fishing, beginning on August 19.
- 5) EO 2-SS-2-42-06 increased the period open to salmon fishing on Cottonwood Creek to 24 hours per day while keeping the Saturday, Sunday, and weekend only restriction, and increased the bag limit for coho salmon to 3 daily in those waters open to salmon fishing, beginning August 19.
- 6) EO 2-RS-2-258-06 prohibited retention of sockeye salmon while sport fishing in all waters of the Susitna River drainage, beginning July 15.
- 7) EO 2-RS-2-40-06 rescinded EO 2-RS-2-25-06, which closed the Susitna River drainage to the retention of sockeye salmon, effective August 11.

**2007**

- 1) EO 2-KS-2-09-07 increased the Deshka River Chinook salmon bag limit to 2 fish over 20 inches and allowed fishing 24 hours per day, effective May 25.
- 2) EO 2-SS-2-36-07 prohibited retention of coho salmon while sport fishing in the Kink Arm Management Area, excluding Eklutna Tail Race and Fish Creek, effective September 4.
- 3) EO 2-SS-2-37-07 rescinded EO 2-SS-2-36-07 on September 11.
- 4) EO 2-RS-2-35-07 prohibited retention of sockeye salmon while sport fishing in all waters of the Susitna River drainage, effective August 11.

**2008**

- 1) EO 2-KS-2-08-08 prohibited use of bait on the Deshka River, effective June 14.
- 2) EO 2-KS-2-12-08 closed Deshka to Chinook salmon fishing, effective June 20.
- 3) EO 2-SS-2-26-08 increased the bag limit for coho salmon to 3 per day in that portion of the Knik Arm open to salmon fishing excluding Jim Creek, beginning August 16.

**2009**

- 1) EO 2-KS-2-06-09 prohibited bait on the Deshka River and limited harvest to Saturdays through Mondays (catch-and-release only on Tuesdays through Fridays), effective May 15.
- 2) EO 2-KS-2-09-09 closed the Deshka River to Chinook salmon fishing, effective June 13.
- 3) EO 2-KS-2-20-09 closed the Little Susitna River to Chinook salmon fishing and closed the last 3 day weekend of fishing within Unit 2 of the Susitna River, effective July 3.

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**2009 (continued)**

- 4) EO 2-SS-2-27-09 increased the bag limit for coho salmon to 3 per day in that portion of the Knik Arm open to salmon fishing, except the Little Susitna River, beginning August 19. Mondays were added to the weekend fisheries of Cottonwood, Wasilla, and Fish creeks.

**2010**

- 1) EO 2-KS-2-09-10 closed the Chuitna, Theodore, and Lewis rivers to Chinook salmon fishing, effective May 15.
- 2) EO 2-KS-2-14-10 prohibited use of bait on the Deshka River, effective June 12.
- 3) EO 2-KS-2-22-10 rescinded EO 2-KS-2-14-10, effective June 19.
- 4) EO 2-KS-2-24-10 reduced the annual limit to 1 Chinook salmon over 20 inches in Unit 4 (Yentna River drainage), effective June 26.
- 5) EO 2-KS-2-31-10 reduced the annual limit to 1 Chinook salmon over 20 inches in Units 5 and 6 (Talkeetna and Chulitna river drainages), effective July 2.
- 6) EO 2-KS-2-30-10 closed the Little Susitna River to Chinook salmon fishing and closed the last 2 weekends of fishing within Unit 2 of the Susitna River, effective July 2.
- 7) EO 2-SS-2-42-10 increased the bag limit for coho salmon to 3 per day in that portion of the Knik Arm open to salmon fishing, except Jim Creek and the Little Susitna River, beginning August 7.
- 8) EO 2-RS-2-38-10 opened the Fish Creek Personal Use Dip Net fishery for salmon other than Chinook salmon only between the hours of 6:00 AM and 11:00 PM, starting 6:00 AM on July 24 and ending 11:00 PM on July 31.

**2011**

- 1) EO 2-KS-2-09-11 closed the Little Susitna River to Chinook salmon fishing, effective June 17.
- 2) EO 2-SS-2-26-11 prohibited the use of bait on the Little Susitna River, effective 12:01 AM, Saturday, August 6 through 11:50 PM, Friday, September 20.
- 3) EO 2-SS-2-27-11 closed all waters of the Knik Arm Management Area, excluding Eklutna Tailrace and Fish Creek, to fishing for coho salmon, effective 12:01 AM, Saturday, August 27.

**2012**

- 1) EO 2-KS-2-06-12 reduced the annual limit for Chinook salmon 20 inches or longer from 5 fish to 2 fish and limited sport fishing gear to 1 unbaited, single hook, artificial lure in the Susitna River drainage, effective 6:00 AM, Tuesday, May 15.
- 2) EO 2-KS-2-07-12 reduced the annual limit for Chinook salmon 20 inches or longer from 5 fish to 2 fish and limited sport fishing gear to 1 unbaited, single hook, artificial lure in the Little Susitna River drainage, effective 6:00 AM, Tuesday, May 15 through 11:59 PM, Friday, July 13.

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**2012 (continued)**

- 3) EO 2-KS-2-14-12 closed the Little Susitna River to fishing for Chinook salmon, effective 6:00 AM, Friday, June 15 through 11:59 PM, Friday, July 13.
- 4) EO 2-KS-2-15-12 prohibited the use of bait and limited sport fishing gear to 1 unbaited, single-hook artificial lure while sport fishing in the Deshka River, effective 6:00 AM, Wednesday, June 20 through 11:00 PM, Friday, July 13.
- 5) EO 2-KS-2-20-12 closed the Susitna River drainage to sport fishing for Chinook salmon and limited sport fishing gear to 1 unbaited, single hook, artificial lure when fishing in waters normally opened to Chinook salmon fishing, effective 6:00 AM, Monday, June 25 through 11:59 PM, Friday, July 13.
- 6) EO 2-RT-2-31-12 increased the possession limit for rainbow trout in Reflections Lake to 5 per day and 5 in possession, with only one 20 inches or greater in length, effective 6:00 AM, Friday, July 6 through 11:59 PM, Monday, December 31.
- 7) EO 2-SS-2-49-12 prohibited sport fishing for coho salmon on the Little Susitna River, effective 12:01 AM, Monday, August 6 through 11:59 PM, Sunday, September 30.
- 8) EO 2-SS-2-50-12 prohibited the use of bait for coho salmon on the Little Susitna River effective 12:01 AM, Monday, August 6 through 11:59 PM, Sunday, September 30.
- 9) EO 2-SS-2-51-12 reduced the bag limit for coho salmon in Jim Creek from 2 fish to 1 fish only between the hours of 6:00 AM to 6:00 PM, effective 6:00 AM, Friday, August 10.
- 10) EO 2-SS-2-53-12 closed all waters of the Knik Arm Management Area, excluding Eklutna Tailrace and Fish Creek, to fishing for coho salmon effective 12:01 AM, Friday, August 17.

**2013**

- 1) EO 2-KS-2-08-13 restricted sport fishing gear to 1 unbaited, single hook, artificial lure and closed fishing for any species after harvesting a Chinook salmon greater than 20 inches in length in the Susitna River drainage, effective 6:00 AM, Tuesday, May 15 through 11:59 PM, Friday, July 13. This EO further prohibited the retention of Chinook salmon (any size) each Tuesday, Wednesday, and Thursday (harvest allowed Fridays through Mondays) within Unit 4 (Yentna River drainage).
- 2) EO 2-KS-2-09-13 established a combined annual limit of 2 Chinook salmon 20 inches or greater in length for fish harvested in the Susitna River drainage and the Little Susitna River, effective 6:00 AM, Tuesday, May 15 through 11:59 PM, Friday, July 13.
- 3) EO 2-KS-2-10-13 restricted sport fishing gear to 1 unbaited, single hook, artificial lure and prohibited the retention of Chinook salmon (any size) each Tuesday, Wednesday, Thursday, and Friday (harvest was allowed Saturdays through Mondays), effective 6:00 AM, Tuesday, May 15 through 11:59 PM, Friday, July 13.

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**2013 (continued)**

- 4) EO 2-KS-2-18-13 decreased the waters of the Little Susitna River open to sport fishing by relocating the ADF&G regulatory marker downstream approximately 1,500 feet from the weir located at river mile 32.5, effective 6:00 AM, Friday, June 14 through 11:59 PM, Sunday, September 15.
- 5) EO 2-KS-2-29-13 reinstated use of bait and multiple hooks on the Deshka River for the remainder of the season, effective 6:00 AM, Saturday, June 29.
- 6) EO 2-SS-2-48-13 increased the bag and possession limits for coho salmon from 2 to 3 in Fish, Cottonwood, and Wasilla creeks, effective 12:01 AM, Saturday, August 17 through December 31. In addition, this emergency order extended the 2-day weekend fisheries of Fish, Cottonwood, and Wasilla creeks to a 3-day fishery to take place each Saturday through Monday.
- 7) EO 2-SS-2-49-13 allowed sport fishing on Fish Creek 7 days per week, effective 6:00 AM, Thursday, August 22.

**2014**

- 1) EO 2-KS-2-06-14 restricted sport fishing gear to 1 unbaited single-hook, artificial lure; prohibited bait. Also prohibited harvest of Chinook salmon in units 1 (except Deshka River), 2, 3, 5, and 6 of the Susitna River and in the Talachulitna River (Unit 4). Within Unit 4, except for the Talachulitna River, this emergency order allowed harvest each Friday, Saturday, Sunday, and Monday and prohibited the retention of Chinook salmon each Tuesday, Wednesday, and Thursday. Where harvest was prohibited, fishing for Chinook salmon was allowed. However, Chinook salmon could not be retained or possessed, and Chinook salmon caught could not be removed from the water and must be released immediately into those waters effective at 6:00 AM, Thursday, May 1 through 11:59 PM, Sunday, July 13.
- 2) EO 2-KS-2-07-14 established a combined annual limit of 2 Chinook salmon 20 inches or greater in length for fish harvested in the Susitna River and the Little Susitna River drainages, beginning 6:00 AM, Thursday, May 1 through 11:59 PM, Sunday, July 13.
- 3) EO 2-KS-2-08-14 for the Little Susinta River restricted gear to 1 unbaited, single-hook, artificial lure only effective at 6:00 AM, Thursday, May 1 through 11:59 PM, Sunday, July 13.
- 4) EO 2-KS-2-20-14 allowed use of bait and multiple hooks for Chinook salmon on the Deshka River effective at 6:00 AM, Saturday, June 14 through 11:59 PM, Sunday, July 13.
- 5) EO 2-KS-2-21-14 closed the Little Susitna River to Chinook salmon fishing as well as catch-and-release fishing effective at 12:01 AM, Friday, June 20 through 11:59 PM, Sunday July 13.
- 6) EO 2-KS-2-31-14 opened the Little Susitna River to sport fishing for Chinook salmon. Only single-hook artificial lures were allowed, and an annual limit of 2 Chinook salmon effective at 6:00 AM, Friday, July 4 through 11:59 PM, Sunday, July 13.

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**2014 (continued)**

- 7) EO 2-KS-2-41-14 opened the Fish Creek personal use fishery. The dip net fishery opened 6:00 AM, Friday July 25 through 11:00 PM, Thursday July 31 with no retention of Chinook salmon allowed.
- 8) EO 2-SS-2-46-14 increased the bag and possession limits for coho salmon from 2 to 3 in Fish, Cottonwood, and Wasilla creeks, effective 6:00 AM, Saturday, August 9 through December 31. In addition, this emergency order extended the 2-day weekend fisheries of Cottonwood and Wasilla creeks to a 3-day fishery to take place each Saturday through Monday.
- 9) EO 2-RS-2-47-14 prohibited the retention of sockeye salmon while sport fishing in Larson Creek and within one-quarter mile of its confluence with the Talkeetna River effective 12:01 AM, Saturday, August 9.
- 10) EO 2-SS-2-50-14 opened Fish Creek to sport fishing 7 days per week effective at 6:00 AM, Thursday, August 14 through 11:59 PM, Wednesday, December 31.
- 11) EO 2-SS-2-51-14 increased the bag and possession limit for salmon other than Chinook salmon, 16 inches or greater in length to 3 per day and in possession, of which, all 3 could be coho salmon in the Little Susitna River open to salmon fishing downstream of the Parks Highway Bridge effective 12:01 AM, Saturday, August 16 through 11:59 PM Wednesday, December 31.

**2015**

- 1) EO 2-KS-2-07-15 restricted sport fishing gear to 1 unbaited single-hook, artificial lure; prohibited bait. This EO also prohibited harvest of Chinook salmon in units 1 (except Deshka River), 2, 3, 5, and 6 of the Susitna River and in the Talachulitna River (Unit 4). Within Unit 4, except for the Talachulitna River, this EO allowed harvest each Friday, Saturday, Sunday, and Monday and prohibited the retention of Chinook salmon each Tuesday, Wednesday, and Thursday. Where harvest was prohibited, fishing for Chinook salmon was allowed. However, Chinook salmon could not be retained or possessed, and Chinook salmon caught could not be removed from the water and must be released immediately into those waters effective at 6:00 AM, Friday, May 1 through 11:59 PM, Monday, July 13.
- 2) EO KS-2-08-15 established a combined annual limit of 2 Chinook salmon 20 inches or greater in length for fish harvested in the Susitna River and the Little Susitna River drainages, beginning 6:00 AM, Friday, May 1 through 11:59 PM, Monday, July 13.
- 3) EO KS-2-09-15 restricted sport fishing gear in the Little Susitna River to 1 unbaited, single-hook, artificial lure and prohibited the retention of Chinook salmon (any size) each Tuesday, Wednesday, Thursday, and Friday (harvest allowed Saturdays–Mondays), effective 6:00 AM, Friday, May 1 through 11:59 PM, Monday, July 13.
- 4) EO 2-KS-2-10-15 restricted Deshka River angling to 1 unbaited, single-hook, artificial lure only effective 6:00 AM, Friday, May 1 through 11:59 PM, Monday, July 13.

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**2015 (continued)**

- 5) EO 2-KS-2-17-15 decreased the waters of the Little Susitna River open to sport fishing by relocating the ADF&G regulatory marker downstream approximately 2,000 feet from the weir located at RM 32.5, effective 6:00 AM, Friday, May 29 through 11:59 PM Tuesday, September 15.
- 6) EO 2-KS-2-19-15 reinstated use of bait and multiple hooks on the Deshka River for the remainder of the season, effective 6:00 AM, Saturday, June 13.
- 7) EO 2-KS-2-25-15 increased sport fishing to 7 days per week for Chinook salmon in the Little Susitna River from its mouth upstream to the Parks highway effective 6:00 AM, Friday, June 19 through 11:59 PM, Monday, July 13.
- 8) EO 2-KS-2-34-15 increased the waters of the Little Susitna River open to sport fishing by relocating the ADF&G regulatory marker downstream approximately 1,500 feet from the weir located at RM 32.5, effective 6:00 AM, Thursday, June 25 through 11:59 PM, Tuesday, September 15.
- 9) EO 2-KS-2-38-15 restored the annual limit to 5 Chinook salmon 20 inches or greater in length for fish harvested in the Deshka and Little Susitna rivers effective 6:00 AM, Saturday, June 27 through 11:59 PM, Monday, July 13.
- 10) EO 2-KS-2-41-15 reinstated use of bait and multiple hooks on the Little Susitna River for the remainder of the season, effective 6:00 AM, Friday, July 3.
- 11) EO 2-RS-2-45-15 opened the Fish Creek personal use fishery. The dip net fishery opened 6:00 AM, Friday July 24 through 11:00 PM, Friday, July 31, with no retention of Chinook salmon allowed.
- 12) EO 2-RS-2-52-15 prohibited the retention of sockeye salmon while sport fishing in Larson Creek and within one-quarter mile of its confluence with the Talkeetna River effective 12:01 AM, Wednesday, August 5.
- 13) EO 2-SS-2-53-15 increased the bag and possession limits for coho salmon from 2 to 3 in the Little Susitna River, effective 12:01 AM, Thursday, August 6 through 11:59 PM, Thursday, December 31.
- 14) EO 2-SS-2-54-15 increased the bag and possession limits for coho salmon from 2 to 3 in Fish, Cottonwood, and Wasilla creeks, effective 12:01 AM, Saturday, August 17 through December 31. In addition, this EO extended the 2-day weekend fisheries of Cottonwood, and Wasilla creeks to 3-day fisheries to take place each Saturday through Monday and increased Fish Creek to a 7-day per week fishery.
- 15) EO 2-RS-2-52-15 allowed retention of sockeye salmon while sport fishing in Larson Creek and within one-quarter mile of its confluence with the Talkeetna River effective 3:00 PM, Thursday, August 13.
- 16) EO 2-SS-2-57-15 closed sport fishing for salmon in Jim Creek effective 12:01 AM, Wednesday, September 2.

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**2016**

- 1) EO 2-KS-2-05-16 limited sport fishing gear in the Eastside Susitna River tributaries to 1 unbaited, single-hook, artificial lure only and prohibited the harvest of Chinook salmon (any size) in Units 2, 3, 5, and 6 of the Susitna River. In waters of Unit 2 open to Chinook salmon fishing, fishing for trout and other species was not affected and was allowed as written in current regulations. Effective May 1–July 13.
- 2) EO 2-KS-2-06-16 established a combined annual limit of 2 Chinook salmon 20 inches or greater in length for fish harvested in the Susitna River and the Little Susitna River drainages, effective May 1.
- 3) EO 2-KS-2-07-16 limited sport fishing gear in the Westside Susitna River tributaries to 1 unbaited, single-hook, artificial lure only, except in the Deshka River. The Deshka River remained open to harvest of Chinook salmon 7 days per week, and bait and multiple hooks were allowed. Within Unit 4 (Yentna River drainage), except for the Talachulitna River, this EO allowed harvest to occur each Friday, Saturday, Sunday, and Monday and prohibited the retention of Chinook salmon each Tuesday–Thursday. On the Talachulitna River, Chinook salmon could not be retained or possessed, and Chinook salmon caught could not be removed from the water and had to be released immediately. Effective May 1.
- 4) EO 2-KS-2-08-16 restricted sport fishing gear and harvest in the Little Susitna River. Only one unbaited, single-hook, artificial lure was allowed, and the retention of Chinook salmon was prohibited each Tuesday–Thursday. Chinook salmon could be retained Friday–Monday effective May 1.
- 5) EO 2-KS-2-18-16 superseded EO 2-KS-2-06-16 and restored the Cook Inlet annual limit of 5 Chinook salmon for fish harvested in the Deshka River only. Effective June 11.
- 6) EO 2-KS-2-22-16 superseded EO 2-KS-2-08-16 opening the Little Susitna River to sport fishing for Chinook salmon, 7 days per week, and multiple hooks allowed. Effective June 28.
- 7) EO 2-KS-2-23-16 superseded EO 2-KS-2-18-16 restoring the annual limit of 5 Chinook salmon for fish harvested in both the Little Susitna River and Deshka Rivers only. Effective June 28.
- 8) EO 2-KS-2-29-16 allowed the use of bait in the Little Susitna River in waters open to Chinook salmon fishing. Effective July 6.
- 9) EO 2-KS-2-37-16 prohibited the use of bait on the Little Susitna River and only unbaited, artificial lures could be used. Effective August 6.
- 10) EO 2-KS-2-38-16 prohibited the retention of sockeye salmon while fishing in Larson Creek and within a one-quarter mile radius of its confluence with the Talkeetna River, effective August 11.
- 11) EO 2-KS-2-39-16 increased the bag and possession limits for salmon other than Chinook salmon to 3 per day, 3 in possession, of which, all 3 may be coho salmon for the water of Fish, Cottonwood, and Wasilla creeks. In addition, the EO extends, the 2-day weekend fisheries to 3 days Saturday–Monday, 6:00 AM–6:00 PM. Effective August 13.
- 12) EO 2-KS-2-40-16 closed Jim Creek to sport fishing for salmon effective August 20.

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**2017**

- 1) EO 2-KS-2-08-17 limits sport fishing gear in the Eastside Susitna River tributaries to one unbaited, single-hook, artificial lure only. Also prohibits the harvest of Chinook salmon (any size) in Units 2,3,5, and 6 of the Susitna River. In waters of Unit 2 open to king salmon fishing, fishing for trout and other species is not affected and is allowed as written in current regulations. Effective May1-July 13, 2017.
- 2) EO 2-KS-2-09-17 limits sport fishing gear in the Westside Susitna River tributaries to one unbaited, single-hook, artificial lure only, except in the Deshka River. Deshka remains open to harvest of Chinook salmon 7 days per week and bait and multiple hooks are allowed. Within Unit 4 (Yentna drainage), including the Talachulitna River, this EO allows harvest to occur each Friday, Saturday, Sunday, and Monday and prohibits the retention of Chinook salmon each Tuesday–Thursday, and establishes an annual limit of 2 Chinook salmon 20 inches or greater in length for Unit 4. The annual limit is 5 Chinook salmon in Cook Inlet, of which only 2 may be from the Yentna River drainage. The Deshka River is not affected by this EO and begins per regulation. Effective May 1, 2017.
- 3) EO 2-KS-2-10-17 establishes a combined annual limit of 2 Chinook salmon 20 inches or greater in length for fish harvested in the Susitna River and the Little Susitna River drainages, effective May 1, 2017.
- 4) EO 2-KS-2-17-17 prohibits the use of bait in the Deshka River, effective June 23, 2017.
- 5) EO 2-KS-2-18-17 closes the Little Susitna River to sport fishing for Chinook salmon except for 2 consecutive 3-day weekends, Saturday–Monday, July 1–3, and Saturday–Monday, July 8–10. Effective, June 24, 2017.
- 6) EO 2-KS-2-22-17 closes the Little Susitna River to Chinook salmon fishing and limits fishing gear to 1 unbaited, single-hook, artificial lure when fishing for other species. Effective July 1, 2017.
- 7) EO 2-KS-2-24-17 closes the Susitna River drainage to sport fishing for Chinook salmon and limits sport fishing gear for other species to 1 unbaited, single-hook, artificial lure when fishing in Units 1–6 of the Susitna River. Effective July 4, 2017.
- 8) EO 2-RS-2-33-17 opens Fish Creek to dipnetting for salmon, other than Chinook salmon. Effective July 26, 2017.
- 9) EO 2-SS-2-35-17 prohibits the use of bait on the Little Susitna River; only unbaited, artificial lures may be used. Effective August 6, 2017.
- 10) EO 2-SS-2-36-17 increases the bag and possession limits for salmon, other than Chinook salmon, to 4 fish in Fish Creek, and extends the 2-day weekend fishery at Fish Creek to 7 days per week. Effective August 22, 2017.
- 11) EO 2-SS-2-37-17 increases the bag and possession limits for salmon other than Chinook salmon to 4 per day and 8 in possession of which all may be coho salmon in Units 1–6. No more than 3 per day and 6 in possession may be pink, chum, and sockeye salmon in combination. Effective August 22, 2017.

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**2017 (continued)**

- 12) EO 2-SS-2-38-17 increases the bag and possession limits for salmon other than Chinook salmon to 4 per day and 4 in possession, of which, all 4 may be coho salmon in Cottonwood and Wasilla Creeks. The EO also extends the 2-day weekend fishery to 3 days Saturday–Monday.
- 13) EO 2-SS-2-39-17 allows bait on the Little Susitna River. Effective August 23, 2017.

**2018**

- 1) EO 2-KS-2-09-18 restricts sport fishing gear and harvest in the Little Susitna River to 1 unbaited, single-hook, artificial lure only and prohibits the retention of Chinook salmon each Tuesday, Wednesday, and Thursday beginning Tuesday, May 1. Fishing is allowed, but Chinook salmon may not be retained or possessed Tuesday–Thursday. Chinook salmon may be retained on Friday–Monday. The EO establishes an annual limit of 2 Chinook salmon from the Little Susitna River. Effective May 1, 2018.
- 2) EO 2-KS-2-10-18 restricts sport fishing for Chinook salmon in the Deshka River, and Yentna River drainages to catch-and-release and prohibits fishing for Chinook salmon in the remainder of the Susitna River drainage. Gear is limited to 1 unbaited, single-hook, artificial lure in all waters of the Susitna River drainage. Fishing for all other species remains open. Unit 2 fishing for trout and other species is allowed 7 days per week. Effective May 1, 2018.
- 3) EO 2-KS-2-15-18 prohibits the retention of Chinook salmon in the Little Susitna River and limits sport fishing to 1 unbaited, single-hook, artificial lure. Effective June 15, 2018.
- 4) EO 2-KS-2-22-18 closes the Susitna River drainage to sport fishing for Chinook salmon and limits gear to 1 unbaited, single-hook, artificial lure in Units 1–6. Effective June 22, 2018.
- 5) EO 2-KS-2-23-18 closes the Little Susitna River to fishing for Chinook salmon and limits anglers to 1 unbaited, single-hook, artificial lure for other species. Effective June 22, 2018.
- 6) EO 2-KS-2-24-18 closes the Upper Yentna River subsistence fishery during the Chinook salmon season. Effective June 25, 2018.
- 7) EO 2-RS-2-44-18 opens the Fish Creek dip net fishery for salmon other than Chinook salmon. Effective July 24, 2018.
- 8) EO 2-RS-2-48-18 increases the bag and possession limit for sockeye salmon on Larson Creek to 6 fish. Effective August 1, 2018.
- 9) EO 2-SS-2-51-18 increases the bag and possession limits for salmon other than Chinook salmon to 3 per day and in possession, of which, all 3 may be coho salmon on the Little Susitna River. Effective August 8, 2018.
- 10) EO 2-SS-2-52-18 increases the bag and possession limits for salmon other than Chinook salmon, to 6 fish of which only 2 may be coho salmon of the waters of Fish Creek open to sport fishing. In addition, this EO allows fishing 7 days per week from 5:00 AM to 10:00 PM. Effective August 8, 2018.

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**2018 (continued)**

- 11) EO 2-SS-2-54-18 increases the bag and possession limits for coho salmon in Fish Creek to 6 fish of which only 4 may be coho salmon. Effective August 9, 2018.
- 12) EO 2-SS-2-55-18 increases the bag and possession limits for salmon other than Chinook salmon to 4 per day and 4 in possession, of which, all may be coho salmon in Cottonwood and Wasilla Creeks, from 5:00 AM to 10:00 PM. Effective August 10, 2018.
- 13) EO 2-SS-2-57-18 increases the bag and possession limits for salmon other than Chinook salmon in Units 1–6 to 4 per day and 8 in possession, of which all may be coho salmon. No more than 3 per day and 6 in possession may be pink, chum, and sockeye salmon in combination. Effective August 14, 2018.

**2019**

- 1) EO 2-KS-2-05-19 closes the Susitna River to sport fishing for Chinook salmon and limits sport fishing gear to 1 unbaited, single-hook, artificial lure in Units 1–6. Effective May 1, 2018.
  - 2) EO 2-KS-2-06-19 closes the Little Susitna River to sport fishing for Chinook salmon and limits gear to 1 unbaited, artificial lure for other species. Effective May 1, 2019.
  - 3) EO 2-NP-2-16-19 closes Alexander and Sucker Lakes to sport fishing to prevent spread of elodea. Effective May 1, 2019.
  - 4) EO 2-KS-2-17-19 restricts the Upper Yentna River subsistence fishery to Wednesday and Fridays from June 1 to June 30 to conserve Chinook salmon. Effective June 3, 2019.
  - 5) EO 2-KS-2-25-19 opens the Little Susitna River to Chinook salmon fishing 7 days per week. Effective June 26, 2019.
  - 6) EO 2-RS-2-39-19 opens the Fish Creek dip net fishery. Effective July 26, 2019.
  - 7) EO 2-RS-2-46-19 increases bag and possession limits for salmon other than Chinook salmon to 6 fish, of which only 2 may be coho salmon in Fish Creek and allows fishing 7 days per week from 5:00 AM to 10:00PM. Effective August 9, 2019.
  - 8) EO 2-RS-2-47-19 closes Larson Creek to fishing for all salmon. Effective August 10, 2019.
  - 9) EO 2-SS-2-48-19 prohibits bait on the Little Susitna River; only unbaited, artificial lures may be used. Effective August 14, 2019.
  - 10) EO 2-SS-2-49-19 closes the Little Susitna River to fishing for coho salmon. Effective August 21, 2019.
  - 11) EO 2-SS-2-50-19 closes the Deshka River to fishing for coho salmon and prohibits bait. Effective August 21, 2019.
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## **APPENDIX H: DESHKA RIVER WEIR COUNTS, 2016–2017**

Appendix H1.–Deshka River weir data, 2016.

Date	Chinook salmon					Coho salmon					Daily passage				River water			Boat traffic thru weir
	Passage		Sampled		Harvest above weir	Passage		Sampled	Harvest above weir	Stage (ft)					Temp (°C)	Clarity <sup>a</sup>		
	Daily	Cum	n	Fem		Daily	Cum				n							
12 May	0	0	0	0	0	0	0	0	0	0	0	0	0	n/a	n/a	poor	7	
13 May	0	0	0	0	0	0	0	0	0	0	0	0	0	n/a	12.0	poor	5	
14 May	7	7	0	0	0	0	0	0	0	0	0	0	0	n/a	13.0	poor	20	
15 May	24	31	0	0	0	0	0	0	0	0	0	0	3	n/a	13.5	poor	6	
16 May	8	39	0	0	0	0	0	0	0	0	0	0	0	2.06	13.0	acc	3	
17 May	2	41	0	0	0	0	0	0	0	0	0	0	1	2.01	13.5	acc	3	
18 May	7	48	0	0	0	0	0	0	0	0	0	0	3	2.15	13.0	acc	2	
19 May	1	49	0	0	0	0	0	0	0	0	0	0	1	2.14	12.0	acc	6	
20 May	4	53	0	0	0	0	0	0	0	0	0	0	0	2.19	12.0	acc	6	
21 May	73	126	0	0	0	0	0	0	0	0	0	0	0	2.38	11.0	poor	11	
22 May	24	150	0	0	0	0	0	0	0	0	0	0	0	3.10	11.0	poor	23	
23 May	5	155	3	1	0	0	0	0	0	0	0	0	0	3.00	11.0	poor	6	
24 May	58	213	2	1	0	0	0	0	0	0	0	0	0	2.75	11.0	mod	4	
25 May	210	423	5	3	0	0	0	0	0	0	0	0	0	2.58	12.0	mod	6	
26 May	194	617	0	0	0	0	0	0	0	0	0	0	0	2.40	12.5	acc	11	
27 May	103	720	10	3	0	0	0	0	0	0	0	0	0	2.27	13.0	acc	11	
28 May	97	817	0	0	0	0	0	0	0	0	0	0	0	2.16	13.5	exc	18	
29 May	393	1,210	7	1	1	0	0	0	0	0	0	0	0	2.09	14.5	exc	21	
30 May	644	1,854	15	2	1	0	0	0	0	0	0	0	1	2.03	15.0	exc	15	
31 May	780	2,634	20	3	0	0	0	0	0	0	0	0	0	2.07	14.5	exc	8	
1 Jun	516	3,150	18	2	1	0	0	0	0	0	0	0	0	2.13	15.5	exc	16	
2 Jun	380	3,530	11	4	1	0	0	0	0	0	0	0	0	2.09	16.0	exc	11	
3 Jun	1,284	4,814	26	11	0	0	0	0	0	0	0	0	0	2.00	14.5	exc	24	
4 Jun	1,148	5,962	20	5	4	0	0	0	0	0	0	0	0	2.04	15.0	exc	40	
5 Jun	822	6,784	40	11	1	0	0	0	0	0	0	0	0	2.10	14.5	exc	30	
6 Jun	1,038	7,822	20	7	0	0	0	0	0	0	0	0	0	2.16	14.0	exc	4	
7 Jun	1,768	9,590	42	9	4	0	0	0	0	0	0	0	0	2.23	11.5	acc	17	
8 Jun	1,206	10,796	30	4	2	0	0	0	0	0	0	0	0	2.69	13.0	poor	23	
9 Jun	616	11,412	23	5	5	0	0	0	0	0	0	0	0	2.49	14.5	acc	26	

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## Appendix H1.–Page 2 of 4.

Date	Chinook salmon					Coho salmon				Daily passage				River water			Boat traffic thru weir
	Passage		Sampled		Harvest above weir	Passage		Sampled	Harvest above weir					Stage (ft)	Temp (°C)	Clarity <sup>a</sup>	
	Daily	Cum	n	Fem		Daily	Cum			n							
10 Jun	1,496	12,908	35	11	13	0	0	0	0	0	0	0	0	2.25	15.5	acc	28
11 Jun	905	13,813	21	5	14	0	0	0	0	0	0	0	0	2.10	15.5	exc	34
12 Jun	768	14,581	17	4	13	0	0	0	0	0	0	0	0	2.06	14.5	exc	29
13 Jun	584	15,165	14	2	0	0	0	0	0	0	0	0	0	2.00	14.5	exc	13
14 Jun	703	15,868	13	5	4	0	0	0	0	0	0	0	0	1.95	15.0	exc	24
15 Jun	489	16,357	10	4	7	0	0	0	0	0	0	0	1	1.88	16.0	exc	22
16 Jun	428	16,785	16	5	0	0	0	0	0	0	0	0	1	1.83	16.5	exc	31
17 Jun	744	17,529	24	9	8	0	0	0	0	0	0	0	0	1.75	17.0	exc	31
18 Jun	444	17,973	10	2	1	0	0	0	0	0	0	0	0	1.69	17.0	exc	17
19 Jun	399	18,372	12	5	6	0	0	0	0	0	0	0	0	1.88	13.5	exc	17
20 Jun	615	18,987	15	7	4	0	0	0	0	0	0	0	0	1.98	13.5	acc	22
21 Jun	1,024	20,011	15	4	0	0	0	0	0	0	0	0	0	2.35	14.0	poor	24
22 Jun	442	20,453	21	9	1	0	0	0	0	0	0	0	0	2.33	16.0	poor	17
23 Jun	193	20,646	0	0	6	0	0	0	0	0	0	0	0	2.30	17.0	acc	16
24 Jun	220	20,866	10	1	4	0	0	0	0	0	0	0	0	2.03	17.0	acc	22
25 Jun	245	21,111	10	4	8	0	0	0	0	0	0	0	0	2.00	16.5	exc	26
26 Jun	182	21,293	0	0	11	0	0	0	0	0	0	0	0	1.95	16.5	exc	23
27 Jun	102	21,395	2	0	0	0	0	0	0	0	0	0	0	1.89	16.5	exc	3
28 Jun	134	21,529	7	2	2	0	0	0	0	0	0	0	0	1.85	17.5	exc	8
29 Jun	60	21,589	0	0	6	0	0	0	0	0	0	0	0	1.79	16.5	exc	8
30 Jun	42	21,631	0	0	1	0	0	0	0	0	0	0	0	1.77	na	exc	11
1 Jul	87	21,718	5	3	3	0	0	0	0	0	0	0	0	1.75	17.0	exc	18
2 Jul	190	21,908	0	0	1	0	0	0	0	0	0	0	0	1.85	15.5	exc	28
3 Jul	106	22,014	15	3	9	0	0	0	0	0	0	6	0	2.18	15.0	acc	17
4 Jul	74	22,088	0	0	8	0	0	0	0	0	0	0	0	2.13	15.0	acc	11
5 Jul	151	22,239	0	0	3	0	0	0	0	0	0	5	0	2.09	15.5	acc	11
6 Jul	32	22,271	0	0	6	0	0	0	0	0	0	1	0	2.28	15.5	acc	10
7 Jul	105	22,376	0	0	3	0	0	0	0	0	0	19	0	2.29	15.5	poor	5
8 Jul	102	22,478	0	0	1	0	0	0	0	0	0	17	0	2.50	16.5	poor	21
9 Jul	29	22,507	0	0	10	2	2	0	0	0	0	9	0	2.36	17.5	acc	18

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## Appendix H1.–Page 3 of 4.

Date	Chinook salmon					Coho salmon				Daily passage				River water			Boat traffic thru weir
	Passage		Sampled		Harvest above weir	Passage		Sampled	Harvest above weir					Stage (ft)	Temp (°C)	Clarity <sup>a</sup>	
	Daily	Cum	n	Fem		Daily	Cum			n							
10 Jul	21	22,528	0	0	6	7	9	0	1	0	0	189	0	2.20	17.5	acc	19
11 Jul	14	22,542	0	0	0	6	15	0	0	0	0	133	0	2.07	17.5	acc	4
12 Jul	14	22,556	0	0	0	3	18	0	0	0	0	210	0	1.90	17.5	exc	9
13 Jul	9	22,565	0	0	5	2	20	0	0	0	0	249	0	1.90	17.5	exc	8
14 Jul	10	22,575	0	0	0	9	29	0	0	0	0	703	0	1.84	20.0	exc	4
15 Jul	4	22,579	0	0	0	0	29	0	0	0	0	1,492	0	1.78	19.5	exc	8
16 Jul	11	22,590	0	0	0	5	34	0	0	0	0	7,185	0	1.67	19.0	exc	0
17 Jul	8	22,598	0	0	0	5	39	0	0	0	0	3,799	0	1.58	19.5	exc	6
18 Jul	3	22,601	0	0	0	2	41	0	0	0	2	4,376	0	1.53	20.0	exc	3
19 Jul	5	22,606	0	0	0	6	47	0	0	0	0	1,631	0	1.49	20.0	exc	4
20 Jul	12	22,618	0	0	0	11	58	0	0	0	2	9,964	0	1.43	19.5	exc	4
21 Jul	10	22,628	0	0	0	6	64	0	0	0	1	9,947	1	1.45	19.5	exc	0
22 Jul	26	22,654	0	0	0	4	68	0	0	0	4	7,278	0	1.43	17.5	exc	7
23 Jul	15	22,669	0	0	0	37	105	2	1	0	0	3,055	0	1.45	16.0	exc	3
24 Jul	14	22,683	0	0	0	18	123	0	0	0	1	2,779	0	1.49	17.0	exc	4
25 Jul	7	22,690	0	0	0	24	147	15	0	0	0	1,434	0	1.65	15.5	exc	0
26 Jul	4	22,694	0	0	0	54	201	12	0	0	0	2,242	0	1.79	15.5	acc	5
27 Jul	4	22,698	0	0	0	62	263	12	0	2	2	2,042	0	1.78	16.0	exc	2
28 Jul	8	22,706	0	0	0	56	319	0	0	0	0	1,162	0	1.68	16.5	exc	4
29 Jul	1	22,707	0	0	0	24	343	4	0	0	0	842	0	1.62	16.0	exc	10
30 Jul	1	22,708	0	0	0	35	378	7	0	0	1	682	0	1.59	15.5	exc	3
31 Jul	1	22,709	0	0	0	15	393	6	0	0	2	393	0	1.70	15.0	exc	10
1 Aug	3	22,712	0	0	0	16	409	6	0	0	1	179	0	1.70	15.0	exc	5
2 Aug	8	22,720	0	0	0	112	521	10	0	0	1	464	0	1.69	14.5	exc	6
3 Aug	3	22,723	0	0	0	51	572	9	0	0	2	351	0	1.68	14.5	exc	5
4 Aug	6	22,729	0	0	0	146	718	0	0	2	0	468	0	1.70	14.0	exc	4
5 Aug	12	22,741	0	0	0	269	987	13	0	1	0	461	0	1.86	15.0	acc	9
6 Aug	17	22,758	0	0	0	904	1,891	14	0	0	1	647	0	2.22	15.0	poor	5
7 Aug	22	22,780	0	0	0	1,692	3,583	8	0	1	2	449	0	2.61	14.0	poor	11
8 Aug	11	22,791	0	0	0	1,547	5,130	24	0	0	1	75	0	3.60	14.0	poor	4

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Date	Chinook salmon					Coho salmon				Daily passage				River water			Boat traffic thru weir
	Passage		Sampled		Harvest above weir	Passage		Sampled	Harvest above weir					Stage (ft)	Temp (°C)	Clarity <sup>a</sup>	
	Daily	Cum	n	Fem		Daily	Cum			n							
9 Aug	9	22,800	0	0	0	609	5,739	0	0	0	0	41	1	4.22	14.0	poor	4
10 Aug	5	22,805	0	0	0	122	5,861	0	0	0	0	37	1	4.55	14.0	poor	2
11 Aug	2	22,807	0	0	0	24	5,885	0	0	0	0	26	0	3.92	14.0	poor	6
12 Aug	2	22,809	0	0	0	73	5,958	40	0	0	2	193	0	3.55	14.5	poor	13
13 Aug	14	22,823	0	0	0	132	6,090	20	0	0	3	127	0	3.67	14.5	poor	26
14 Aug	6	22,829	0	0	0	115	6,205	0	0	0	1	58	1	3.69	15.0	poor	17
15 Aug	8	22,837	0	0	0	104	6,309	0	0	0	0	50	0	3.35	15.0	poor	12
16 Aug	4	22,841	0	0	0	73	6,382	10	0	0	1	29	0	3.00	15.0	poor	6
17 Aug	3	22,844	0	0	0	59	6,441	0	0	0	1	19	0	2.81	15.0	poor	7
18 Aug	8	22,852	0	0	0	37	6,478	0	0	0	0	12	0	2.63	15.0	poor	5
19 Aug	5	22,857	0	0	0	32	6,510	10	0	0	5	6	0	2.45	14.5	poor	8
20 Aug	4	22,861	0	0	0	35	6,545	23	1	3	7	9	0	2.35	14.0	acc	15
21 Aug	5	22,866	0	0	0	30	6,575	18	0	0	3	11	0	2.29	13.5	acc	9
22 Aug	3	22,869	0	0	0	25	6,600	22	0	1	4	4	0	2.32	13.0	acc	7
23 Aug	2	22,871	0	0	0	82	6,682	20	0	0	2	1	1	3.17	12.0	poor	1
24 Aug	0	22,871	0	0	0	46	6,728	0	0	0	2	1	0	3.91	12.0	poor	3
25 Aug	0	22,871	0	0	0	0	6,728	0	0	0	0	0	0	4.46	11.0	poor	2
26 Aug	0	22,871	0	0	0	0	6,728	0	0	0	0	0	0	4.60	12.0	poor	3
27 Aug	0	22,871	0	0	0	0	6,728	0	0	0	0	0	0	4.63	13.0	poor	8
28 Aug	1	22,872	0	0	0	7	6,735	0	0	1	0	1	0	3.92	13.5	poor	17
29 Aug	0	22,872	0	0	0	13	6,748	0	0	0	0	2	0	3.27	14.0	acc	1
30 Aug	0	22,872	0	0	0	15	6,763	0	0	0	0	0	2	2.90	13.0	acc	2
31 Aug	2	22,874	0	0	0	11	6,774	0	0	0	0	1	0	2.72	12.5	acc	8
1 Sep	0	22,874	0	0	0	14	6,788	0	0	1	3	1	1	2.49	12.5	acc	6
2 Sep	0	22,874	0	0	0	13	6,801	0	0	0	0	0	0	2.38	12.5	acc	10
3 Sep	0	22,874	0	0	0	14	6,815	0	0	0	0	0	0	2.30	12.5	acc	8
4 Sep	0	22,874	0	0	0	5	6,820	0	0	0	4	0	0	2.25	12.5	acc	7
Total	22,874		564	157	184	6,820		305	3	12	61	65,567	19				1,327

Note: Cum = cumulative; n = sample size (number of fish); Fem = number of female fish in the sample; Red = sockeye salmon; Chum = chum salmon; Pink = pink salmon; Pike = northern pike; n/a means no data

<sup>a</sup> acc = acceptable; mod = moderate; exc = excellent

Appendix H2.—Deshka River weir data, 2017.

Date	Chinook salmon					Coho salmon				Daily passage				River water			Boat traffic thru weir
	Passage		Sampled		Harvest above weir	Passage		Sampled	Harvest above weir					Stage (ft)	Temp (°C)	Clarity <sup>a</sup>	
	Daily	Cum	<i>n</i>	Fem		Daily	Cum			<i>n</i>							
17 May																	
18 May	2	2	0	0	0	0	0	0	0	0	0	0	0	2.17	11.0	exc	4
19 May	14	16	0	0	0	0	0	0	0	0	0	0	0	2.17	11.0	exc	3
20 May	3	19	0	0	0	0	0	0	0	0	0	0	0	2.31	11.0	exc	25
21 May	2	21	0	0	0	0	0	0	0	0	0	0	1	2.34	11.0	exc	18
22 May	11	32	0	0	0	0	0	0	0	0	0	0	0	2.29	11.0	exc	3
23 May	4	36	0	0	0	0	0	0	0	0	0	0	0	2.30	10.0	exc	3
24 May	31	67	0	0	0	0	0	0	0	0	0	0	0	2.53	10.0	exc	5
25 May	0	67	0	0	0	0	0	0	0	0	0	0	0	2.57	8.0	exc	6
26 May	9	76	0	0	0	0	0	0	0	0	0	0	0	3.40	7.0	poor	10
27 May	12	88	0	0	0	0	0	0	0	0	0	0	0	3.13	7.0	poor	8
28 May	2	90	0	0	0	0	0	0	0	0	0	0	0	2.92	8.0	mod	4
29 May	265	355	0	0	0	0	0	0	0	0	0	0	0	2.86	8.0	mod	7
30 May	61	416	10	5	0	0	0	0	0	0	0	0	0	2.77	9.0	mod	4
31 May	33	449	0	0	0	0	0	0	0	0	0	0	0	2.92	8.5	mod	12
1 Jun	264	713	0	0	0	0	0	0	0	0	0	0	0	2.76	11.0	mod	22
2 Jun	296	1,009	16	8	0	0	0	0	0	0	0	0	0	2.59	13.5	mod	13
3 Jun	250	1,259	4	1	4	0	0	0	0	0	0	0	0	2.35	15.0	exc	42
4 Jun	213	1,472	6	2	2	0	0	0	0	0	0	0	2	2.29	15.0	exc	21
5 Jun	148	1,620	4	1	0	0	0	0	0	0	0	0	0	2.19	14.0	exc	3
6 Jun	312	1,932	7	0	0	0	0	0	0	0	0	0	1	2.16	13.5	exc	9
7 Jun	290	2,222	9	4	9	0	0	0	0	1	0	0	0	2.09	14.0	exc	15
8 Jun	238	2,460	0	0	0	0	0	0	0	0	0	0	0	2.07	15.0	exc	11
9 Jun	346	2,806	10	7	13	0	0	0	0	0	0	0	0	2.00	16.0	exc	24
10 Jun	447	3,253	8	7	2	0	0	0	0	0	0	0	0	1.99	17.0	exc	25
11 Jun	735	3,988	22	8	3	0	0	0	0	0	0	0	0	2.02	15.0	exc	23
12 Jun	428	4,416	10	8	0	0	0	0	0	0	0	0	1	1.98	14.5	exc	17
13 Jun	363	4,779	13	6	4	0	0	0	0	0	0	0	0	1.95	13.5	exc	15
14 Jun	201	4,980	0	0	3	0	0	0	0	0	0	0	0	1.93	13.0	exc	20

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Appendix H2.–Page 2 of 4.

Date	Chinook salmon					Coho salmon				Daily passage				River water			Boat traffic thru weir
	Passage		Sampled		Harvest above weir	Passage		Sampled	Harvest above weir					Stage (ft)	Temp (°C)	Clarity <sup>a</sup>	
	Daily	Cum	n	Fem		Daily	Cum			n							
15 Jun	432	5,412	11	3	5	0	0	0	0	3	0	0	0	1.93	13.0	exc	8
16 Jun	397	5,809	13	5	5	0	0	0	0	0	0	0	0	1.90	15.0	exc	17
17 Jun	574	6,383	8	2	14	0	0	0	0	2	0	0	0	1.87	15.0	exc	25
18 Jun	575	6,958	16	9	6	0	0	0	0	5	0	0	0	1.80	15.0	exc	22
19 Jun	419	7,377	10	5	0	0	0	0	0	4	0	0	0	1.79	15.0	exc	2
20 Jun	543	7,920	15	7	4	0	0	0	0	3	0	0	0	1.77	15.0	exc	3
21 Jun	107	8,027	0	0	2	0	0	0	0	1	0	0	0	1.80	13.0	exc	12
22 Jun	354	8,381	20	13	1	0	0	0	0	0	0	0	0	1.85	14.5	exc	14
23 Jun	264	8,645	10	3	14	0	0	0	0	0	0	0	0	1.82	13.5	exc	13
24 Jun	167	8,812	0	0	2	0	0	0	0	0	0	0	0	1.80	13.5	exc	12
25 Jun	115	8,927	10	5	3	0	0	0	0	0	0	0	0	1.76	16.0	exc	0
26 Jun	574	9,501	9	5	1	0	0	0	0	0	0	0	0	1.70	16.0	exc	5
27 Jun	204	9,705	9	6	0	0	0	0	0	0	0	0	0	1.69	16.0	exc	1
28 Jun	103	9,808	0	0	0	0	0	0	0	0	0	0	0	1.86	15.0	exc	4
29 Jun	152	9,960	4	1	0	0	0	0	0	0	0	0	0	1.79	15.5	exc	12
30 Jun	174	10,134	4	2	1	0	0	0	0	2	0	0	0	1.77	16.0	exc	15
1 Jul	110	10,244	2	1	0	0	0	0	0	0	0	0	1	1.71	16.5	exc	22
2 Jul	142	10,386	5	2	0	0	0	0	0	0	0	0	0	1.67	17.0	exc	7
3 Jul	42	10,428	1	0	1	0	0	0	0	2	0	0	0	1.69	15.5	exc	12
4 Jul	32	10,460	0	0	0	0	0	0	0	0	0	0	0	1.69	15.0	exc	2
5 Jul	10	10,470	3	0	0	0	0	0	0	0	0	0	1	1.73	16.5	exc	10
6 Jul	93	10,563	0	0	0	0	0	0	0	0	0	0	0	1.70	18.0	exc	6
7 Jul	96	10,659	0	0	0	0	0	0	0	0	0	0	0	1.64	18.5	exc	6
8 Jul	73	10,732	0	0	0	0	0	0	0	0	0	0	0	1.57	19.0	exc	8
9 Jul	43	10,775	0	0	0	0	0	0	0	0	0	0	0	1.75	15.5	exc	6
10 Jul	141	10,916	10	6	0	0	0	0	0	0	0	0	0	2.10	16.0	poor	5
11 Jul	16	10,932	0	0	0	0	0	0	0	0	1	0	1	2.13	16.5	poor	8
12 Jul	25	10,957	0	0	0	0	0	0	0	0	0	0	0	2.08	16.0	exc	5
13 Jul	19	10,976	0	0	0	0	0	0	0	0	0	0	0	1.95	17.5	exc	8
14 Jul	31	11,007	0	0	0	0	0	0	0	0	0	0	0	1.85	19.0	exc	8

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Date	Chinook salmon					Coho salmon				Daily passage				River water			Boat traffic thru weir
	Passage		Sampled		Harvest above weir	Passage		Sampled	Harvest above weir					Stage (ft)	Temp (°C)	Clarity <sup>a</sup>	
	Daily	Cum	n	Fem		Daily	Cum			n							
15 Jul	5	11,012	0	0	0	0	0	0	0	0	0	0	0	1.75	18.0	exc	7
16 Jul	0	11,012	0	0	0	0	0	0	0	0	0	0	0	1.67	18.0	exc	12
17 Jul	16	11,028	4	1	0	0	0	0	0	0	0	37	0	1.60	18.0	exc	5
18 Jul	4	11,032	0	0	0	0	0	0	0	0	0	9	0	1.57	17.0	exc	0
19 Jul	9	11,041	0	0	0	0	0	0	0	0	0	2	0	1.62	17.0	exc	2
20 Jul	12	11,053	0	0	0	2	2	0	0	0	0	17	0	1.62	17.0	exc	2
21 Jul	8	11,061	0	0	0	4	6	0	0	0	0	121	0	1.60	17.5	exc	4
22 Jul	7	11,068	0	0	0	4	10	0	0	0	0	75	0	1.55	18.0	exc	0
23 Jul	1	11,069	0	0	0	0	10	0	0	0	0	43	0	1.49	18.0	exc	6
24 Jul	8	11,077	0	0	0	4	14	0	0	0	0	342	0	1.45	18.5	exc	6
25 Jul	2	11,079	0	0	0	15	29	0	0	0	0	745	0	1.41	17.0	exc	1
26 Jul	3	11,082	0	0	0	8	37	0	0	0	0	685	1	1.41	16.0	exc	2
27 Jul	9	11,091	0	0	0	35	72	0	0	2	0	1,745	0	1.45	16.0	exc	1
28 Jul	13	11,104	0	0	0	37	109	0	0	0	0	2,197	0	1.49	17.0	exc	8
29 Jul	10	11,114	0	0	0	45	154	0	0	2	3	2,220	0	1.49	16.5	exc	8
30 Jul	9	11,123	0	0	0	40	194	0	3	3	1	956	0	1.47	17.0	exc	9
31 Jul	4	11,127	0	0	0	18	212	0	0	5	0	960	0	1.43	17.0	exc	2
1 Aug	6	11,133	0	0	0	15	227	0	0	1	2	800	1	1.38	18.0	exc	2
2 Aug	7	11,140	0	0	0	34	261	0	0	7	4	2,865	0	1.38	17.0	exc	4
3 Aug	3	11,143	0	0	0	72	333	0	0	0	0	978	0	1.51	16.0	exc	2
4 Aug	7	11,150	0	0	0	1,599	1,932	36	0	11	25	3,876	0	1.88	16.0	poor	7
5 Aug	5	11,155	0	0	0	1,210	3,142	23	0	5	8	319	0	3.15	14.0	poor	25
6 Aug	19	11,174	0	0	0	3,374	6,516	24	2	77	35	791	0	2.70	15.0	mod	16
7 Aug	8	11,182	0	0	0	561	7,077	17	6	15	10	348	0	2.29	15.5	mod	8
8 Aug	3	11,185	0	0	0	226	7,303	0	8	3	7	362	0	2.04	16.0	exc	7
9 Aug	6	11,191	0	0	0	214	7,517	0	0	3	4	613	0	1.92	16.0	exc	5
10 Aug	4	11,195	0	0	0	234	7,751	0	18	6	4	522	0	1.85	16.0	exc	3
11 Aug	5	11,200	0	0	0	197	7,948	26	8	2	1	316	0	1.76	15.5	exc	16
12 Aug	8	11,208	0	0	0	173	8,121	8	2	4	6	308	0	1.71	15.0	exc	15
13 Aug	5	11,213	0	0	0	429	8,550	36	23	6	6	345	0	1.72	14.0	exc	11

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Date	Chinook salmon					Coho salmon				Daily passage				River water			Boat traffic thru weir
	Passage		Sampled		Harvest above weir	Passage		Sampled	Stage (ft)					Temp (°C)	Clarity <sup>a</sup>		
	Daily	Cum	<i>n</i>	Fem		Daily	Cum			<i>n</i>							
14 Aug	16	11,229	0	0	0	797	9,347	10	4	5	7	441	0	1.84	14.0	exc	15
15 Aug	15	11,244	0	0	0	3,073	12,420	40	34	10	17	571	0	2.22	14.0	mod	10
16 Aug	27	11,271	0	0	0	1,330	13,750	0	25	2	4	294	1	2.07	14.0	mod	8
17 Aug	10	11,281	0	0	0	1,390	15,140	10	6	3	13	174	1	2.08	13.0	mod	6
18 Aug	27	11,308	0	0	0	4,990	20,130	32	6	17	33	328	0	2.35	12.5	mod	10
19 Aug	34	11,342	0	0	0	9,600	29,730	27	15	22	54	401	0	2.57	12.0	mod	19
20 Aug	10	11,352	0	0	0	3,567	33,297	0	1	3	33	144	0	2.98	12.0	poor	11
21 Aug	8	11,360	0	0	0	1,088	34,385	29	2	1	6	50	0	3.08	10.5	poor	9
22 Aug	7	11,367	0	0	0	447	34,832	0	3	0	3	10	0	3.45	10.0	poor	10
23 Aug	5	11,372	0	0	0	268	35,100	0	6	0	6	10	1	2.94	10.5	poor	7
24 Aug	3	11,375	0	0	0	291	35,391	0	0	0	8	15	0	2.68	11.5	mod	6
25 Aug	2	11,377	0	0	0	157	35,548	21	6	0	2	5	1	3.22	11	poor	14
26 Aug	1	11,378	0	0	0	223	35,771	0	2	0	4	2	1	4.08	10.5	poor	17
27 Aug	2	11,380	0	0	0	143	35,914	0	2	0	5	3	1	3.3	9.5	poor	16
28 Aug	0	11,380	0	0	0	127	36,041	0	0	0	3	0	0	3.13	15	mod	2
29 Aug	0	11,380	0	0	0	80	36,121	0	2	0	2	0	0	2.88	15	mod	5
30 Aug	0	11,380	0	0	0	97	36,218	0	0	0	4	1	0	2.73	14	mod	9
31 Aug	0	11,380	0	0	0	88	36,306	0	0	0	1	3	0	2.59	13	mod	3
1 Sep	1	11,381	0	0	0	114	36,420	0	0	0	3	2	0	2.55	14	mod	6
2 Sep	0	11,381	0	0	0	146	36,566	0	0	0	0	0	0	2.59	13	mod	8
3 Sep	1	11,382	0	0	0	163	36,729	0	2	0	0	3	0	2.76	13	mod	14
4 Sep	0	11,382	0	0	0	73	36,802	0	0	0	0	1	0	2.65	13.5	mod	19
5 Sep	1	11,383	0	0	0	67	36,869	0	0	0	2	0	0	2.45	13.5	mod	3
Total	11,383		283	133	99	36,869		339	186	238	327	25,055	16				1,073

Note: Cum = cumulative; n = sample size (number of fish); Fem = number of female fish in the sample; Red = sockeye salmon; Chum = chum salmon; Pink = pink salmon; Pike = northern pike; n/a means no data

<sup>a</sup> acc = acceptable; mod = moderate; exc = excellent

Appendix H3.—Deshka River weir data, 2018.

Date	Chinook salmon					Coho salmon				Daily passage				River water			Boat traffic thru weir
	Passage		Sampled		Harvest above weir	Passage		Sampled	Harvest above weir					Stage (ft)	Temp (°C)	Clarity <sup>a</sup>	
	Daily	Cum	n	Fem		Daily	Cum			n							
29 May	0	0	0	0	0	0	0	0	0	0	0	0	0	n/a	n/a	acc	2
30 May	2	2	0	0	0	0	0	0	0	0	0	0	0	2.75	12	acc	0
31 May	25	27	0	0	0	0	0	0	0	0	0	0	0	2.74	12	acc	5
1 Jun	33	60	0	0	0	0	0	0	0	0	0	0	0	2.75	13	acc	8
2 Jun	155	215	4	2	0	0	0	0	0	0	0	0	0	2.65	14	acc	20
3 Jun	161	376	3	0	0	0	0	0	0	0	0	0	0	2.52	15	acc	17
4 Jun	275	651	13	5	0	0	0	0	0	0	0	0	0	2.4	16	acc	8
5 Jun	134	785	4	0	0	0	0	0	0	0	0	0	0	2.35	14	acc	8
6 Jun	83	868	0	0	0	0	0	0	0	0	0	0	1	2.3	15	acc	5
7 Jun	52	920	0	0	0	0	0	0	0	0	0	0	0	2.22	15	acc	2
8 Jun	64	984	0	0	0	0	0	0	0	0	0	0	0	2.16	15	exc	16
9 Jun	26	1,010	3	0	0	0	0	0	0	0	0	0	0	2.12	15	exc	15
10 Jun	100	1,110	0	0	0	0	0	0	0	0	0	0	0	2.08	16.5	exc	12
11 Jun	31	1,141	2	0	0	0	0	0	0	0	0	0	0	2.05	17	exc	7
12 Jun	36	1,177	4	0	0	0	0	0	0	0	0	0	0	2.01	15	exc	7
13 Jun	29	1,206	0	0	0	0	0	0	0	0	0	0	0	1.98	14.5	exc	7
14 Jun	170	1,376	0	0	0	0	0	0	0	0	0	0	0	1.94	16	exc	7
15 Jun	501	1,877	14	3	0	0	0	0	0	0	0	0	0	1.9	16	exc	7
16 Jun	477	2,354	8	5	0	0	0	0	0	0	0	0	0	2.05	14	exc	13
17 Jun	1,450	3,804	30	8	0	0	0	0	0	0	0	0	0	2.61	13	acc	10
18 Jun	170	3,974	0	0	0	0	0	0	0	0	0	0	0	3.27	13	poor	3
19 Jun	9	3,983	0	0	0	0	0	0	0	0	0	0	0	3.89	12	poor	5
20 Jun	265	4,248	0	0	0	0	0	0	0	0	0	0	0	4.12	13	poor	2
21 Jun	380	4,628	10	3	0	0	0	0	0	2	0	0	0	3.61	15	poor	2
22 Jun	677	5,305	20	4	0	0	0	0	0	3	0	0	0	3.14	13.5	good	8
23 Jun	618	5,923	18	7	0	0	0	0	0	0	0	0	1	2.92	15	good	13
24 Jun	323	6,246	14	2	0	0	0	0	0	0	0	0	0	2.91	14.5	good	12
25 Jun	342	6,588	12	4	0	0	0	0	0	0	0	0	0	2.73	14	good	4
26 Jun	229	6,817	4	2	0	0	0	0	0	0	0	0	1	2.59	13	good	4

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Date	Chinook salmon					Coho salmon				Daily passage				River water			Boat traffic thru weir
	Passage		Sampled		Harvest above weir	Passage		Sampled	Harvest above weir					Stage (ft)	Temp (°C)	Clarity <sup>a</sup>	
	Daily	Cum	n	Fem		Daily	Cum			n							
27 Jun	214	7,031	10	3	0	0	0	0	0	1	0	0	2	2.49	14	good	1
28 Jun	299	7,330	8	3	0	0	0	0	0	2	0	0	1	2.38	15	good	9
29 Jun	119	7,449	8	3	0	0	0	0	0	0	0	0	0	2.27	14	good	11
30 Jun	106	7,555	0	0	0	0	0	0	0	4	0	0	1	2.18	15	good	11
1 Jul	84	7,639	4	3	0	0	0	0	0	2	0	0	0	2.16	16	Good	10
2 Jul	13	7,652	0	0	0	0	0	0	0	0	0	0	0	2.1	18	Good	5
3 Jul	21	7,673	0	0	0	0	0	0	0	3	0	0	1	2.05	19	Good	10
4 Jul	43	7,716	3	0	0	0	0	0	0	0	0	0	0	1.96	20	Good	6
5 Jul	105	7,821	9	0	0	0	0	0	0	1	0	0	0	1.89	20	Good	7
6 Jul	18	7,839	1	1	0	0	0	0	0	0	0	0	0	1.86	20	exc	12
7 Jul	148	7,987	1	0	0	0	0	0	0	0	0	0	0	1.84	21	exc	6
8 Jul	9	7,996	0	0	0	0	0	0	0	0	0	0	0	1.79	20	exc	16
9 Jul	5	8,001	1	0	0	0	0	0	0	0	0	0	1	1.9	17	exc	0
10 Jul	124	8,125	14	3	0	0	0	0	0	0	0	4	0	2.5	16	acc	4
11 Jul	11	8,136	3	0	0	0	0	0	0	0	0	0	0	2.87	15	acc	5
12 Jul	3	8,139	0	0	0	0	0	0	0	1	0	0	0	3.02	15	acc	3
13 Jul	58	8,197	0	0	0	0	0	0	0	0	0	6	1	3.15	16	acc	9
14 Jul	13	8,210	1	1	0	1	1	0	0	0	0	0	0	2.31	16	acc	8
15 Jul	10	8,220	6	1	0	4	5	0	0	2	0	2	0	2.47	16	acc	10
16 Jul	9	8,229	5	1	0	3	8	0	0	4	0	4	0	2.48	17	good	3
17 Jul	35	8,264	5	1	0	17	25	0	0	1	0	25	0	2.41	17	good	3
18 Jul	37	8,301	0	0	0	48	73	0	0	2	0	440	0	2.43	17	good	6
19 Jul	10	8,311	0	0	0	18	91	0	0	1	0	232	1	2.43	18	good	4
20 Jul	34	8,345	2	0	0	15	106	0	0	3	9	772	0	2.21	18	good	16
21 Jul	24	8,369	0	0	0	14	120	0	0	2	7	2,051	1	2.19	18	exc	20
22 Jul	22	8,391	0	0	0	13	133	0	0	1	5	1,888	0	1.98	19	exc	10
23 Jul	43	8,434	0	0	0	56	189	0	0	3	28	11,154	2	1.89	19	exc	5
24 Jul	18	8,452	0	0	0	81	270	4	0	2	18	10,616	0	1.88	20	exc	5
25 Jul	8	8,460	0	0	0	84	354	7	0	1	22	6,440	0	1.87	18	exc	6

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Date	Chinook salmon					Coho salmon				Daily passage				River water			Boat traffic thru weir
	Passage		Sampled		Harvest above weir	Passage		Sampled	Harvest above weir					Stage (ft)	Temp (°C)	Clarity <sup>a</sup>	
	Daily	Cum	n	Fem		Daily	Cum			n							
26 Jul	6	8,466	0	0	0	99	453	1	0	0	7	3,821	0	1.8	19	exc	6
27 Jul	4	8,470	0	0	0	71	524	4	3	3	2	2,112	0	1.82	18	exc	12
28 Jul	5	8,475	0	0	0	88	612	0	2	3	5	2,014	0	1.82	18	exc	16
29 Jul	7	8,482	0	0	0	67	679	0	0	2	2	3,094	0	1.8	19	exc	9
30 Jul	10	8,492	0	0	0	38	717	0	0	2	0	3,223	0	1.8	19	exc	8
31 Jul	5	8,497	0	0	0	33	750	0	0	0	0	1,905	0	1.76	20	exc	6
1 Aug	5	8,502	0	0	0	8	758	2	0	3	0	2,296	0	1.74	20	exc	2
2 Aug	4	8,506	0	0	0	11	769	0	0	1	0	1,323	0	1.72	18	exc	3
3 Aug	2	8,508	0	0	0	31	800	11	0	2	1	901	0	1.82	17	exc	14
4 Aug	3	8,511	0	0	0	214	1,014	30	0	1	3	1,353	0	2.05	18	exc	11
5 Aug	3	8,514	0	0	0	159	1,173	10	3	0	2	808	0	2	18	exc	17
6 Aug	0	8,514	0	0	0	80	1,253	7	0	0	0	312	0	1.91	17	exc	6
7 Aug	4	8,518	0	0	0	2,473	3,726	26	1	4	0	1,095	3	2	16	exc	4
8 Aug	3	8,521	0	0	0	2,373	6,099	14	2	3	4	440	0	2.31	16	acc	15
9 Aug	6	8,527	0	0	0	1,586	7,685	10	3	1	3	191	0	2.67	16	acc	13
10 Aug	1	8,528	0	0	0	1,529	9,214	10	4	3	1	222	0	2.57	15	acc	17
11 Aug	2	8,530	0	0	0	545	9,759	30	13	1	3	148	0	2.33	17	acc	32
12 Aug	2	8,532	0	0	0	1,399	11,158	10	1	2	2	154	2	2.25	16	acc	12
13 Aug	1	8,533	0	0	0	597	11,755	5	1	0	0	29	0	3.13	15	poor	6
14 Aug	2	8,535	0	0	0	615	12,370	10	1	0	0	5	0	4.08	14	poor	6
15 Aug	1	8,536	0	0	0	57	12,427	10	3	2	1	6	0	3.97	14	poor	10
16 Aug	1	8,537	0	0	0	66	12,493	5	6	2	0	14	0	3.57	15	poor	14
17 Aug	3	8,540	0	0	0	70	12,563	23	18	3	2	20	0	3.37	14	poor	16
18 Aug	4	8,544	0	0	0	121	12,684	20	1	0	3	18	0	2.94	14	acc	17
19 Aug	1	8,545	0	0	0	29	12,713	6	0	0	2	5	0	2.62	15	acc	10
20 Aug	2	8,547	0	0	0	50	12,763	9	0	1	2	5	0	2.57	14	acc	5
21 Aug	0	8,547	0	0	0	31	12,794	5	0	0	0	4	0	2.5	14	acc	1
22 Aug	0	8,547	0	0	0	59	12,853	0	0	0	2	0	0	2.68	14	acc	5
23 Aug	0	8,547	0	0	0	27	12,880	11	0	0	1	0	0	2.92	15	acc	6

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Date	Chinook salmon					Coho salmon					Daily passage				River water			Boat traffic thru weir
	Passage		Sampled		Harvest above weir	Passage		Sampled	Harvest above weir	Red	Chum	Pink	Pike	Stage (ft)	Temp (°C)	Clarity <sup>a</sup>		
	Daily	Cum	n	Fem		Daily	Cum											
24 Aug	0	8,547	0	0	0	48	12,928	20	0	0	0	1	0	3.4	14	acc	6	
25 Aug	2	8,549	0	0	0	27	12,955	0	0	1	0	0	0	4	13	poor	11	
26 Aug	0	8,549	0	0	0	7	12,962	0	2	0	0	0	0	4.43	13	poor	11	
27 Aug	0	8,549	0	0	0	0	12,962	0	0	0	0	0	0	4.56	14	poor	5	
28 Aug	0	8,549	0	0	0	0	12,962	0	0	0	0	0	0	4.95	13	poor	5	
29 Aug	0	8,549	0	0	0	0	12,962	0	0	0	0	0	0	0	0		0	
Total	8,549		244	65	0	12,962		300	64	81	137	59,153	19				787	

*Note:* Cum = cumulative; *n* = sample size (number of fish); Fem = number of female fish in the sample; Red = sockeye salmon; Chum = chum salmon; Pink = pink salmon; Pike = northern pike; n/a means no data

<sup>a</sup> acc = acceptable; mod = moderate; exc = excellent



**APPENDIX I: PRESENCE OF NORTHERN PIKE IN  
WATERS OF THE NORTHERN COOK INLET  
MANAGEMENT AREA**

Appendix II.—Confirmed and suspected presence of northern pike in waters of the Northern Cook Inlet Management Area.

Primary classification	Secondary classification	Site	Presence documented	Presence suspected
Susitna Basin Lakes	Alexander Creek	Alexander Lake	X	
		Sucker Lake	X	
		Trail Lake	X	
		Rabbit Lake	X	
Susitna Basin Lakes	Lower Susitna	Flathorn Lake	X	
		Figure 8 Lake	X	
		Arrowhead Lake	X	
		Baver Lake	X	
Susitna Basin Lakes	Mid Susitna	Witsoe Lake	X	
		Whitsol Lake	X	
		Lockwood Lake	X	
		Lady Slipper Lake	X	
		Unnamed	X	
		Unnamed	X	
		Unnamed	X	
		Vern Lake	X	
		Ding Dong (Upper Vern)	X	
		Yensus Lake		X
Susitna Basin Lakes	Yentna River	Whiskey Lake	X	
		Bulchitna Lake	X	
		Fish Creek Lake 1	X	
		Fish Creek Lake 2	X	
		Fish Creek Lake 3	X	
		Fish Creek Lake 4	X	
		Donkey Creek	X	
		Hewitt Lake	X	
		No Name (Big Bend)	X	
		Chelatna Lake	X	
		Cabin Lake (Big Bend)	X	
		Pear Lake (Upper Skwentna)	X	
		Stickleback Lake	X	
Susitna Basin Lakes	Skwentna River	Eight Mile Lake	X	
		Seven Mile Lake	X	
		No Name (Herk Strip)	X	
		One Stone Lake	X	
		Shell Lake	X	
Susitna Basin Lakes	Deshka River	Parker Lake	X	

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Primary classification	Secondary classification	Site	Presence documented	Presence suspected
Susitna Basin Lakes	Deshka River	Trapper Lake	X	
		No Name Lake	X	
		Amber Lake	X	
		Rocky Lake	X	
		Neil Lake	X	
		Kroto Lake	X	
		No Name 1mi SW Parker	X	
		No Name 2 mi SW Parker	X	
		Schneider Lake	X	
Susitna Basin Lakes	Upper Susitna	Kashwitna Lake		X
		Caswell Lake		X
		Fish Lake (Birch Ck)	X	
		Sawmill Lake		X
		Swan Lake	X	
Susitna Basin Lakes	Nancy Lake Area	Nancy Lake	X	
		Redshirt Lake	X	
		Lynx Lake	X	
		Cow Lake	X	
		Little Chicken Lake	X	
		Big No Luck Lake	X	
		Little No Luck Lake	X	
		South Rolly Lake	X	
		North Rolly Lake	X	
		Denaina Lake (Tanaina)	X	
		Milo Lake	X	
		Frazer Lake	X	
		Little Frazer Lake	X	
		James Lake	X	
		Owl Lake	X	
		Char Lake	X	
		Ardaw Lake (Milo Lake #3)	X	
		Phoebe Lake	X	
		Chicken Lake	X	
		Echo Pond #1	X	
		Echo Pond #2	X	
		Echo Pond #3	X	
		Candle Stick Lake	X	
		Bains Pond #1	X	
		Bains Pond #2	X	
		Bains Pond #3	X	

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Primary classification	Secondary classification	Site	Presence documented	Presence suspected
Susitna Tributaries		Fish Creek (Flathorn)	X	
		Fish Creek (Kroto)	X	
		Lake Creek	X	
		Fish Lake Creek	X	
		Alexander Creek	X	
		Trappers Creek	X	
		Sucker Creek	X	
		Montana Creek	X	
		Rolly Creek	X	
		Moose Creek	X	
		Bottle Creek	X	
Susitna Tributaries	Yentna River	Hewitt Creek	X	
		Donkey Creek	X	
Susitna Tributaries		Indian Creek (Yentna)	X	
		Indian (Chulitna)		X
		Rabideux Creek	X	
		Fish Lake Creek	X	
		Kutna Creek (Yentna)	X	
		Shell Creek	X	
		Eightmile Creek	X	
		Caswell Creek	X	
		Witsoe Creek	X	
		Trapper (Talkeetna)		X
		Talachulitna Creek		X
		Johnson Creek	X	
		Otter Creek	X	
		Unnamed (Lower Su)	X	
		Sunshine Creek		X
		Anderson Creek		X
		Wiggle Creek		X
		Birch Creek		X
		Yentna River	X	
		Skwentna River	X	
		Chulitna River		X
		Tokositna	X	
		Deshka River	X	
Knik Arm Drainage	Big Lake Drainage	Fish Creek (Big Lake)		X
		Meadow Creek (Big Lake)	X	
		Big Lake	X	
		Little Meadow Creek	X	

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Primary classification	Secondary classification	Site	Presence documented	Presence suspected
Knik Arm Drainage	Big Lake Drainage	Blodgett Lake		X
		West Beaver Lake		X
		Rainbow Lake		X
Knik Arm Drainage	Cottonwood Creek	Cottonwood Creek		X
		Cottonwood Lake		X
		Anderson Lake	X	
		Wasilla Lake		X
		Kings Lake	X	
		Mud Lake		X
Knik Arm Drainage		Little Susitna River	X	
Knik Arm Drainage	Little Susitna River	Hourglass ( Big L. Area)	X	
		Horseshoe Lake (Little-Su)	X	
Knik Arm Drainage	Knik River	Swan Lake		X
		Jim Lake/Jim Creek		X
Knik Arm Drainage		Knik Lake	X	
		Mink Creek	X	
		Fire Creek	X	
		Pear Lake		X
		Goose Creek	X	
West Cook Inlet		Chuit River	X	
		Lewis River	X	
		Chuitbuna Lake	X	
		Threemile Creek	X	
West Cook Inlet	Threemile Creek	Threemile lakes	X	
West Cook Inlet		Tukallah Lake	X	
		Nikolai River	X	
West Cook Inlet	Chuitna River	Third Lake		X
West Cook Inlet	Tyonek	Bunka Lake		X
Matanuska Valley lakes		Big Lake cut-off Lake	X	
		Crystal Lake (Willow)	X	
		Shirley Lake (Willow)		X
		Long Lake (Willow)	X	
		Prator Lake	X	
		Memory Lake	X	
		Finger Lake		X
		Wallace Lake	X	
		Baptist Pond	X	



## **APPENDIX J: MATANUSKA–SUSITNA BOROUGH LAKE MANAGEMENT PLANS**

Appendix J1.—Matanuska–Susitna Borough lake management plans.

Lake		Regulations	
Name	Characteristics	Details	Date adopted
Big Lake	Surface area: 2,495 acres Maximum depth: 89 feet Mean depth: 30 feet	Personal watercraft prohibited on Meadow Creek Quiet hours: 11:00 PM–8:00 AM Sun–Sat Ice house registration No-wake zone: 150 feet from shoreline	Aug 1998
Blodgett Lake	Surface area: 57.6 acres Maximum depth: 29 feet Mean depth: 10.7 feet	Horsepower limit: 10 Personal watercraft prohibited Quiet hours: 10:00 PM–8:00 AM Sun–Thurs 11:00 PM–8:00 AM Fri–Sat	Sep 1997
Bonnie Lake Area	Surface area: 105 acres	Electric motors only	Nov 1996
Upper Bonnie Lake	Maximum depth: 35 feet Mean depth: not available	Personal watercraft prohibited	
Bonnie Lake	Surface area: 99.8 acres Maximum depth: 35 feet Mean depth: not available	Personal watercraft prohibited	
Ravine Lake	Surface area: 12 acres Maximum depth: 25 feet Mean depth: 12 feet	Horsepower limit: 10 Personal watercraft prohibited	
Carpenter Lake	Surface area: 176 acres Maximum depth: 30 feet Mean depth: 8.1 feet	Personal watercraft prohibited 10 HP limit - time share Quiet hours: 10:00 PM–8:00 AM Sun–Sat No-wake zone: 100 feet from shore, winter motor vehicle ban	Jun 2006

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Lake		Regulations	
Name	Characteristics	Details	Date adopted
Caswell Lake	Surface area: 157 acres Maximum depth: 28 feet Mean depth: 10 feet	Personal watercraft prohibited Quiet hours: 10:00 PM–8:00 AM Sun–Sat No-wake zone: 100 feet from shore, winter motor vehicle ban	Jun 2014
Christiansen Lake	Surface area: 179 acres Maximum depth: 82 feet Mean depth: 22 feet	Personal watercraft prohibited 15 HP limit Quiet hours: 10:00 PM–8:00 AM, Sun–Sat Special permit: To accommodate building construction, early season testing of river boats and other special uses. HP limit may be waived by special permit.	Sep 1999
Cottonwood Creek		Non-motorized.	1995
Cottonwood Lake	Surface area: 262 acres Maximum depth: 39 feet Mean depth: 11 feet	Mufflers, cowlings, exhaust systems Quiet hours: 11:00 PM–8:00 AM Sun–Sat No-wake zone: 100 feet from shoreline Special events permits	1995
Crooked Lake	Surface area: 250 acres Maximum depth: 35 feet Mean depth: 14 feet	No-wake zone: 50 feet from shoreline at the public dock	Aug 1995
Crystal Lake	Surface area: 132 acres Maximum depth: 24 feet Mean depth: 11.7 feet	Quiet hours: 10:00 PM–8:00 AM Sun–Sat	Aug 1996
Diamond Lake	Surface area: 139 acres Maximum depth: 23 feet Mean depth: 7.6 feet	Horsepower limit: 10 Quiet hours: 10:00 PM–8:00 AM Sun–Sat Ice House Registration No-wake zone: 100 feet from ordinary high water mark	Apr 1999
Florence Lake	Surface area: 55 acres Maximum depth: 41 feet Mean depth: 17.6 feet	Quiet hours: 10:00 PM–8:00 AM Sun–Sat No-wake zone: 100 feet from shoreline. Personal watercraft ban	Apr 2006

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Lake		Regulations	
Name	Characteristics	Details	Date adopted
Finger Lake	Surface area: 362 acres Maximum depth: 44 feet Mean depth: 15.5 feet	Mufflers, cowlings, exhaust systems Quiet hours: 11:00 PM–8:00 AM Sun–Sat No-wake zone: 100 feet from shoreline Special events permits	1995
Fish Lake	Surface area: 59 acres Maximum depth: not available Mean depth: not available	Horsepower limit: 5	Aug 1997
Honeybee Lake	Surface area: 58 acres Maximum depth: 35 feet Mean depth: 13.5 feet	Electric Motors Only Quiet hours: 7:00 PM–9:00 AM Sun–Sat	Nov 1997
Island & Doubloon Island Lake	Surface area: 85 acres Maximum depth: not available Mean depth: not available	Personal watercraft prohibited	Aug 1996
Doubloon Lake	Surface area: 14 acres Maximum depth: not available Mean depth: not available	Personal watercraft prohibited	
Jean Lake	Surface area: 51 acres Maximum depth: 30 feet Mean depth: 3-5 feet	Personal watercraft prohibited Electric motors only Quiet hours: 10:00 PM–8:00 AM Sun–Sat Commercial floatplane operations are discouraged.	Jan 2006
John Lake	Surface area: 52 acres Maximum depth: not available Mean depth: not available	Horsepower limit: 10 Quiet hours: 10:00 PM–8:00 AM Sun–Sat (electric and trolling motors allowed during quiet hours)	Aug 1996
Knik Lake	Surface area: 50 acres Maximum depth: 37 feet Mean depth: 19 feet	Horsepower limit: 5 Quiet hours: 10:00 PM–8:00 AM Sun–Thurs 11:00 PM–8:00 AM Fri–Sat	Aug 1995

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Lake		Regulations	
Name	Characteristics	Details	Date adopted
Lake of the Woods	Maximum depth: 20-30 feet Mean depth: 10-12 feet	Quiet hours: 7:00 PM–9:00 AM Sun–Sat Personal watercraft ban Electric motors only Maintain current limited access.	Apr 2010
Liten Lake	Surface area: 57 acres Maximum depth: 10+ feet Mean depth: 4-6 feet	Motorized watercraft prohibited Personal watercraft prohibited No-wake zone: lake-wide Quiet hours: 10:00 PM–8:00 AM Sun–Sat Public access to the lake is discouraged. Commercial floatplane operations are discouraged.	Jan 2006
Little Beaver Lake	Surface area: 57 acres Maximum depth: 10+ feet Mean depth: 9 feet	Motorized watercraft prohibited Quiet hours: 10:00 PM–8:00 AM Sun–Sat Maintain current limited access.	Jun 2008
Little Lonely Lake	Surface area: 56 acres Maximum depth: 63 feet Mean depth: 20 feet	Personal watercraft prohibited Horsepower limit: 10 No-wake zone: lake-wide Quiet hours: 10:00 PM–8:00 AM Sun–Sat Ice house registration Commercial floatplane operations are discouraged.	May 2005
Long Lake (Houston)	Surface area: 44 acres Maximum depth: 17 feet Mean depth: 8.8 feet	Personal watercraft prohibited Horsepower limit: 10 No-wake zone: 100 feet from ordinary high water mark Quiet hours: 10:00 PM–8:00 AM Sun–Sat	Nov 2001
Marilee Lake	Surface area: 33.8 acres Maximum depth: 18 feet Mean depth: 7.3 feet	Horsepower limit: 5	Sep 1998

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Lake		Regulations	
Name	Characteristics	Details	Date adopted
Marion Lake	Surface area: 113 acres Maximum depth: 42 feet Mean depth: 20.6 feet	Personal watercraft prohibited Quiet hours: 10:00 PM–8:00 AM Sun–Sat No-wake zone: 100 feet from ordinary high water mark. Time share: A lake-wide no wake speed except on Thursdays, Fridays, Saturdays, and all 3-day weekends mandated by federal holiday (Memorial Day, Fourth of July, and Labor Day).	Nov 2000
Memory Lake	Surface area: 84 acres Maximum depth: 20 feet Mean depth: 7.2 feet	Horsepower limit: 10 Quiet hours: 10:00 PM–8:00 AM Sun–Sat Access to be day use only	Sep 1998
Morvoe Lake	Surface area: 87 acres Mean depth: 11 feet Maximum depth: 17 feet	25 Horsepower limit Quiet hours: 11:00 PM–8:00 AM Sun–Sat	2007
Neklasen Lake	Surface area: 72 acres Maximum depth: 67 feet Mean depth: 16 feet	Personal watercraft prohibited Quiet hours: 10:00 PM–8:00 AM Sun–Sat No-wake zone: 100 feet from shoreline except when a waterskier is leaving dock or shoreline. Timeshare: Lake-wide no-wake zone except Thursdays, Fridays, first and third Saturdays of the month, national holidays, and three-day weekends resulting from national holidays.	Jan 2000
Lower Neklasen Lake	Surface area: 36 acres Maximum depth: unknown Mean depth: less than 5 feet	All motorized watercraft prohibited	Jan 2000
Paradise Lake	Surface area: 25 acres Maximum depth: 20 feet Mean depth: 5-10 feet	Electric motors only Quiet hours: 9:00 PM–9:00 AM Sun–Sat Personal watercraft prohibited	Apr 2007

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Lake		Regulations	
Name	Characteristics	Details	Date adopted
Question Lake	Surface area: 80 acres Maximum depth: unknown Mean depth: unknown	Horsepower limit: 5 Quiet hours: 10:00 PM–8:00 AM Sun–Sat Motor vehicles prohibited during winter months when lake is frozen	Sep 1998
Little Question Lake	Surface area: 25 acres Maximum depth: unknown Mean depth: unknown	Non-motorized Quiet hours: 10:00 PM–8:00 AM Sun–Sat Motor vehicles prohibited during winter months when lake is frozen	Sep 1998
Lake Five and Unnamed Lakes	Surface area: unknown Maximum depth: unknown Mean depth: unknown	Non-motorized Quiet hours: 10:00 PM–8:00 AM Sun–Sat All these lakes allow for a special permit to exceed motor limits for Motor vehicles prohibited during winter months when lake is frozen Ice house registration	Sep 1998
Rainbow Lake	Surface area: 72.3 acres Maximum depth: not available Mean depth: not available	Horsepower limit: 10 Quiet hours: 10:00 PM–8:00 AM Sun–Sat	Nov 1995
Shirley Lake	Surface area: 121 acres Maximum depth: 23 feet Mean depth: 14.1 feet	Personal watercraft prohibited. Quiet hours: 10:00 PM–8:00 AM Sun–Sat No-wake zone: 100 feet from ordinary high water mark	Apr 2006
Stephans Lake	Surface area: 95 acres Maximum depth: 30 feet	Horsepower limit: 10 on timeshare basis. Personal watercraft ban Quiet hours: 10:00 PM–8:00 AM Sun–Sat No-wake zone: 100 feet from shoreline	Mar 2007
Sunbeam Lake	Surface area: 22 acres Maximum depth: 15 feet	Electric motors only Personal watercraft ban Quiet hours: 10:00 PM–8:00 AM Sun– Sat No-wake zone: 100 feet from shoreline	Nov 2007
Suncrest Lake	Surface area: 40 acres Maximum depth: 30 feet	Horsepower limit: 10 on timeshare basis. Personal watercraft ban Quiet hours: 10:00 PM–8:00 AM Sun–Sat No-wake zone: 100 feet from shoreline	Nov 2007

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Lake		Regulations	
Name	Characteristics	Details	Date adopted
Threemile Lake	Surface area: 119 acres Maximum depth: 15 feet Mean depth: 3.3 feet	Personal watercraft prohibited. Amphibious vehicles prohibited. Horsepower limit: 10 Quiet hours: 10:00 PM–8:00 AM Sun–Sat	Nov 2002
Toad Lake	Surface area: 50 acres Maximum depth: unknown Mean depth: 10 feet	Electric motors only	Sep 1998
Twin Island Lake	Surface area: 151 acres Maximum depth: 61 feet Mean depth: 14.8 feet	Horsepower limit: 10 Quiet hours: 10:00 PM–8:00 AM Sun–Thu 11:00 PM–8:00 AM Fri–Sat Walk-in only access	Jul 1997
Walby Lake	Surface area: 54 acres Maximum depth: 18 feet Mean depth: 5.4 feet	Horsepower limit: 10 Quiet hours: 10:00 PM–8:00 AM Sun–Sat Motor vehicles prohibited during winter months when lake is frozen	Sep 1998
Wasilla Lake	Surface area: 374 Maximum depth: 48 feet Mean depth: 17 feet	Mufflers, cowlings, exhaust systems Quiet hours: 11:00 PM–8:00 AM, Sun–Sat. No-wake zone: 100 feet from shoreline Special events permits	Jun 1995
West Papoose Lake	Surface area: 212 acres Maximum depth: not available Mean depth: not available	Personal watercraft prohibited Quiet hours: 11:00 PM–8:00 AM Sun–Sat No-wake zone: 100 feet from ordinary high water mark	Aug 1996
Whiskey Lake	Surface area: 270 acres Maximum depth: 35 feet Mean depth: not available	Personal watercraft prohibited No-wake zone: 150 feet from ordinary high water mark Quiet hours: 10:00 PM–8:00 AM Sun–Sat Motorized watercraft prohibited on portions of the inlet creek and outlet (Whiskey) creek.	Aug 2004
Wolf Lake	Surface area: 62 acres Maximum depth: 17 feet Mean depth: 6.8 feet	Horsepower limit: 6 Motor vehicles prohibited during winter months when lake is frozen	Jul 1997
Wolverine Lake	Surface area: 55 acres Maximum depth: 7 feet Mean depth: 2.2 feet	Personal watercraft prohibited Quiet hours: 10:00 PM–8:00 AM Sun–Sat Electric motors only Commercial floatplane operations prohibited.	Aug 2004