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An Overview of the Subsistence Fisheries of the Bristol Bay Area, Alaska, 1985–2024

by

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and

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December 2025

Alaska Department of Fish and Game

Division of Subsistence



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

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**AN OVERVIEW OF THE SUBSISTENCE FISHERIES OF THE BRISTOL
BAY AREA, ALASKA, 1985-2024**

by

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EXECUTIVE SUMMARY

- Bristol Bay subsistence fisheries are an essential component of the local mixed cash-subsistence economy and way of life in Bristol Bay communities. About 58% of the subsistence harvest by local community residents, as measured in pounds usable weight, is Pacific salmon *Oncorhynchus* and about 9% is other finfishes.
- The Alaska Board of Fisheries (board) has found that “all finfish” in the Bristol Bay Area (BBA) are customarily taken or used for subsistence purposes (5 AAC 01.336). As established by the board, amounts reasonably necessary for subsistence uses (ANS) are 157,000–172,171 salmon (including 55,000–65,000 Kvichak River drainage sockeye salmon *O. nerka*) and 250,000 lb usable weight of other finfishes.
- The number of Bristol Bay subsistence salmon permits issued had been stable since 1990, ranging between approximately 1,100–1,200 permits issued each year, but a decline has been observed in the recent previous five years. The recent five-year (2019–2023) average is 994 permits issued.
- Most subsistence permit holders are residents of Bristol Bay communities: for the 10-year period spanning 2014–2023, 75% of permit holders were Bristol Bay residents.
- From 2015–2024, of the five Bristol Bay districts, the Nushagak District accounted for the largest portion of the subsistence harvest at 47% (46,132 estimated salmon); the Naknek-Kvichak District ranked a close second at 46% (45,488), followed by Togiak at 5% (4,819), Egegik at 1% (997), and Ugashik at 1% (696).
- Most subsistence permits are issued for the Nushagak and Naknek-Kvichak districts. Permits issued for subsistence are the highest for the Nushagak District (506 permits on average for 2019–2023), followed by the Naknek-Kvichak District (338 permits).
- Sockeye salmon make up the largest portion of the Bristol Bay subsistence salmon harvest. Based on returned subsistence permits, sockeye salmon composed 78% of the historical (1985–2023) average harvest, followed by king *O. tshawytscha* (11%), coho *O. kisutch* (6%), chum *O. keta* (4%), and pink salmon *O. gorbuscha* (1%).
- Annual subsistence salmon harvests in the BBA declined from the early 1980s through the early 2000s, and then again from 2018 through 2024. Since 1985, the average annual harvest has been approximately 132,631 salmon, whereas the previous five-year (2019–2023) average was 91,134 salmon. The estimated harvest in 2024 was higher than the recent years of 2021–2023, but still among the lowest harvests since the inception of the permit program.
- Within the BBA, the Nushagak District continues to support the largest king salmon subsistence harvest, followed distantly by the Naknek-Kvichak District. This is reflected in the previous five-year (2019–2023) average for both watersheds: 6,463 and 318 king salmon, respectively. The board has not made an ANS finding specific to king salmon in the BBA.
- A general decline has occurred since 1993 in the Kvichak River watershed subsistence sockeye salmon fishery, historically the largest component of the Bristol Bay subsistence salmon harvest. The long-term (1985–2023) average annual harvest for this fishery is 48,057 sockeye salmon. The recent five-year (2019–2023) average annual harvest was 18,271 sockeye salmon. Harvests in 2023 (18,673 salmon) and 2024 (18,526) were greater than the low years of 2021 and 2022 but were still some of the lowest on record. Salmon resource abundance appears to be healthy: Kvichak River sockeye salmon escapements have been within the sustainable escapement goal range of 2,000,000–10,000,000 sockeye salmon every year since 2004. There

are likely multiple factors contributing to the decline in harvests, including less fishing effort as measured through permit participation and a decrease in the number of salmon harvested per permit. There have been no regulatory restrictions on subsistence harvests in Bristol Bay. Underlying causes of declining effort or harvests per permit are unclear.

- Other fishes taken for subsistence purposes in the BBA include Pacific herring *Clupea pallasii*, various species of smelt; Dolly Varden *Salvelinus malma*; lake trout *S. namaycush*; rainbow trout *O. mykiss*; Arctic grayling *Thymallus arcticus*; northern pike *Esox lucius*; various species of whitefishes *Coregonus*, *Prosopium*; burbot *Lota lota*; and Alaska blackfish *Dallia pectoralis*. Although there are no Alaska Department of Fish and Game annual subsistence harvest assessment programs for these species, harvest estimates are available through periodic subsistence household surveys. These fishes are taken throughout the year with a variety of harvest methods and are an important part of annual subsistence uses in Bristol Bay.

Key words: subsistence fishing, Kvichak River, Nushagak River, Naknek River, Egegik River, Ugashik River, Togiak River, Bristol Bay, subsistence permit, sockeye salmon, Board of Fisheries

1. INTRODUCTION

In an area that is world-renowned for its commercial fisheries and sport fishing opportunities, subsistence uses of wild renewable resources remain the most consistent and the most reliable component of the local economy¹ of Bristol Bay communities. Each year, subsistence fishing, hunting, and gathering provide hundreds of pounds of highly nutritious food for residents of the area. Much of the seasonal round of activities is shaped by the natural cycles of fishes, birds, mammals, and plants. Knowledge that is fundamental to making a living in the region is preserved and communicated through gathering and processing wild resources, including fishing and hunting activities. Practices that support families and communities express, emphasize, and teach the values that support a subsistence way of life through the harvest, preparation, and sharing of wild foods. In the 20th century, significant economic, social, cultural, and demographic change took place in Bristol Bay during the evolution of its economy, which is a mixture of cash and subsistence sectors. In the 21st century, subsistence activities and values remain a cornerstone of area residents' way of life, a link to the traditions of the past, and one of their bases for survival, sustainability, and prosperity.

This report briefly describes the subsistence fisheries of the Bristol Bay Area (BBA) (Figure 1-1), with a primary focus on the fisheries for Pacific salmon *Oncorhynchus*. This overview is based on information gathered from the subsistence salmon permit program administered by the Alaska Department of Fish and Game (ADF&G or department) through the divisions of Subsistence and Commercial Fisheries, as well as ethnographic research conducted by the Division of Subsistence (division). This report contains updated harvest and permit information, as well as historical harvest and permit numbers that remain relevant for the BBA.² Throughout this report, the commercial district nomenclature (from west to east: Togiak District; Nushagak District; Naknek-Kvichak District; Egegik District; and Ugashik District) has been used to refer to not only the marine waters of the commercial districts but also the freshwater drainages associated with each river draining into those districts. The Alaska Board of Fisheries (board) most recently heard a report on the subsistence fisheries of the BBA in 2022 at that year's board meeting (Jones and Neufeld 2022). The 2024 data presented in this report are preliminary.

-
1. The mode of production (economic system) in which most Bristol Bay communities operate is termed a mixed cash-subsistence economy, where economic input comes from both wage and subsistence labor (Wolfe and Walker 1987).
 2. Note that historical harvest and permit numbers are recorded in the Alaska Subsistence Fisheries Database (ASFDB).

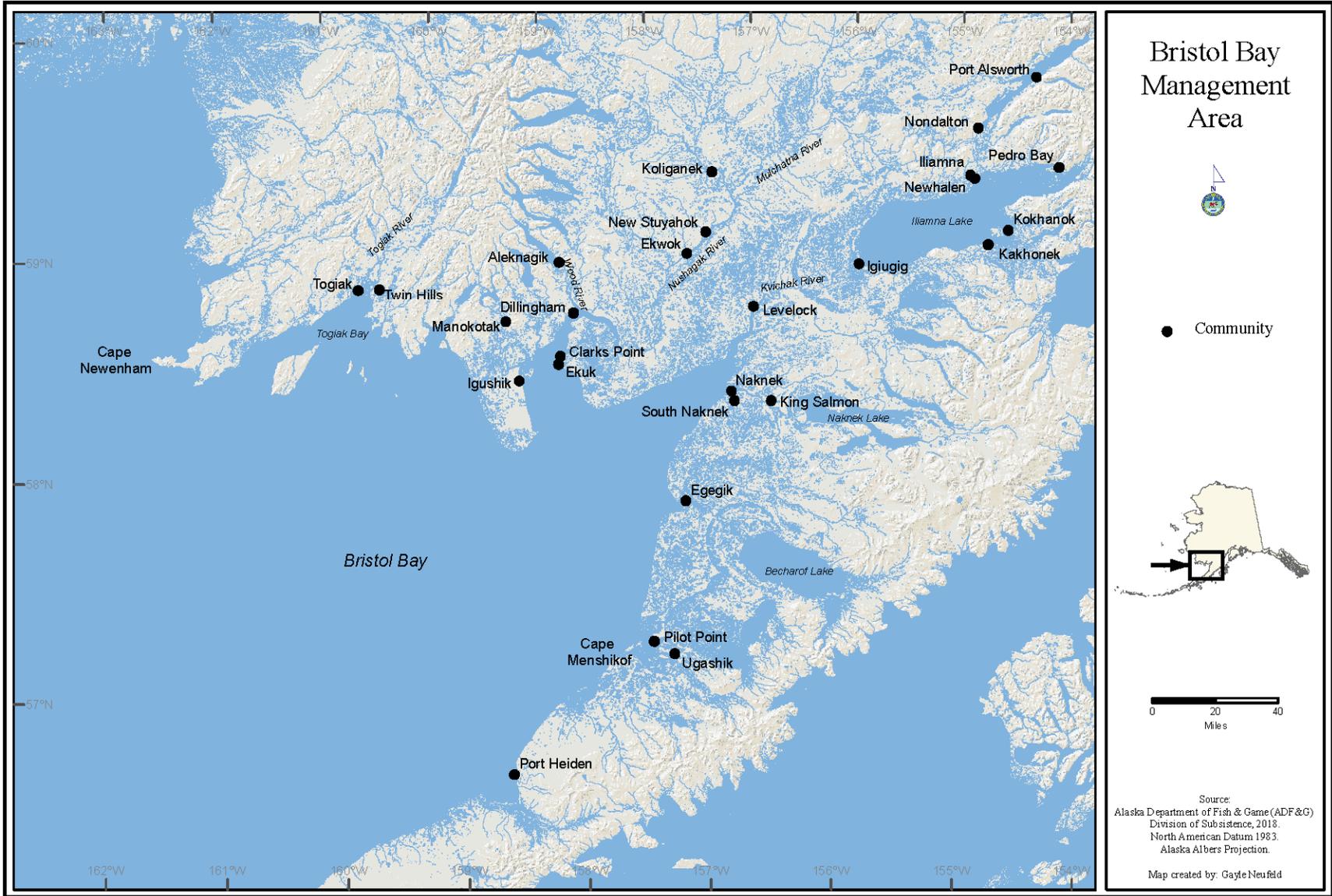


Figure 1-1.—Map of the Bristol Bay Area.

THE BRISTOL BAY REGION

Population, Communities, and Cash Economy

According to the Alaska Department of Labor and Workforce Development, the population of the communities in Bristol Bay in 2024 was 6,218 people in 26 communities and those remainder populations outside of established communities (Figure 1-1; Table 1-1). There are two regional centers: the community of Dillingham (population 2,031 in 2024) and the Bristol Bay Borough, which consists of Naknek, South Naknek, and King Salmon (combined population of 741 in 2024). The portion of the Lake and Peninsula Borough that is within the BBA had a 2024 total population of 1,039 people spread across 13 communities. The Alaska Native population of the BBA accounts for approximately three-quarters of the total population (Jones and Neufeld 2022).³ Alaska Native peoples of the area include Central Yup'ik, Dena'ina Athabascan, and Alutiiq.

Commercial fishing and services dominate the cash economy of the area, and thus the economy is highly seasonal. According to the American Community Survey, the five-year (2019–2023) average estimated per capita income was \$34,097 for the Dillingham Census Area, \$59,725 for the Bristol Bay Borough, and \$45,228 for the total Lake and Peninsula Borough, which all range around the Alaska average of \$44,928 (U.S. Census Bureau 2021). Division studies have also documented a pattern of seasonal employment, reliance on commercial fishing, and relatively low cash incomes (Fall et al. 2006; Holen et al. 2011; 2012b; Krieg et al. 2009) (see also the Division of Subsistence Community Subsistence Information System, or CSIS⁴).

General Patterns of Subsistence Harvests

Since 1990, under state regulations, all Alaska state residents have been eligible to participate in subsistence salmon fishing in all Bristol Bay drainages. Subsistence harvests of wild resources in the BBA are among the largest in the state and are very diverse. Based on the results of the most recent (2014) comparative analysis of permit returns and postseason household surveys, the 2014 estimated annual BBA harvest of salmon was 194 lb usable weight per person (Figure 1-2) (Fall 2018). In the BBA, salmon composed a larger percentage (58%) of the total noncommercial harvest of wild resources than in any other management area in the state or the combined urban Alaska areas (nonsubsistence areas) (Figure 1-3). As shown in Figure 1-4, based on the division's comprehensive surveys, salmon made up 58% of the estimated harvest over time from 1987–2018 for residents in the BBA; land mammals (mostly moose *Alces alces* and caribou *Rangifer tarandus*) composed 21%; fishes other than salmon composed 9%; and other resources, such as marine mammals, birds and eggs, marine invertebrates, and wild plants, provided 12% of the harvest.

Per capita wild resource harvests are generally higher in the smaller communities of the BBA than in the two regional centers of Dillingham and the Bristol Bay Borough (comprising three close communities). As reported in Jones and Neufeld (2022:2), the harvest estimate from the 1980s–2000s for the smaller communities was 426 lb per person per year, with a household average of 1,541 lb; the composition of subsistence harvests in the smaller communities for this same period was similar to that of the area overall at 51% salmon, 25% land mammals, 11% other fishes, and 13% other resources.

3. Tyler Thompson, "A breakdown of the Bristol Bay Census results for 2020," KDLG, Sept. 24, 2012, accessed November 24, 2025, <https://www.kdlg.org/community/2021-09-24/a-breakdown-of-the-bristol-bay-census-results-for-2020>.

4. ADF&G Community Subsistence Information System: <https://www.adfg.alaska.gov/sb/CSIS/>. Hereinafter cited as CSIS.

Table 1-1.--Population of the Bristol Bay Area, 1980, 1990, 2000, 2010, 2020, and 2024.

Area	U.S. Census									ADLWD
	1980	1990		2000		2010		2020		2024
	Total	Total	Alaska Native (%)	Total						
Dillingham Census Area										
Aleknagik	154	185	83%	221	85%	219	84%	211	96%	209
Clarks Point	79	60	88%	75	92%	62	89%	67	100%	57
Dillingham	1,563	2,017	56%	2,466	61%	2,329	67%	2,249	70%	2,031
Ekuk	7	3	67%	a	a	a	a	a	a	a
Ekwok	77	77	87%	130	94%	115	95%	111	99%	116
Koliganek	117	181	96%	182	87%	209	97%	183	94%	169
Manokotak	294	385	96%	399	95%	442	96%	488	83%	490
New Stuyahok	331	391	96%	471	96%	510	96%	512	90%	449
Portage Creek	48	5	60%	36	86%	2	50%	4	100%	4
Togiak	470	613	87%	809	93%	817	94%	817	89%	721
Twin Hills	70	66	92%	69	94%	74	97%	103	99%	93
Remainder	22	29	28%	64	58%	68	57%	112	b	99
Subtotal	3,232	4,012	73%	4,922	76%	4,847	80%	4,857	b	4,438
Bristol Bay Borough										
King Salmon	545	696	16%	442	30%	374	35%	307	24%	301
Naknek	318	575	41%	678	47%	544	52%	470	52%	381
South Naknek	145	136	79%	137	84%	79	84%	67	60%	59
Remainder	86	3	100%	1	0%	0	0%	0	b	0
Subtotal	1,094	1,410	32%	1,258	45%	997	48%	844	b	741
Lake and Peninsula Borough^d										
Egegik	75	122	70%	116	77%	109	47%	39	10%	29
Igiugig	33	33	79%	53	83%	50	70%	68	88%	63
Iliamna	94	94	66%	102	58%	109	65%	108	86%	109
Kokhonak	83	152	90%	174	91%	170	90%	152	86%	135
Levelock	79	105	83%	122	95%	69	90%	69	93%	57

-continued-

Table 1-1.—Page 2 of 2.

Area	U.S. Census								ADLWD	
	1980	1990		2000		2010		2020		2024
	Total	Total	Alaska Native (%)	Total						
Newhalen	87	160	94%	160	91%	190	92%	168	87%	163
Nondalton	173	178	89%	221	90%	164	84%	133	76%	105
Pedro Bay	33	42	90%	50	64%	42	71%	43	100%	42
Pilot Point	66	53	85%	100	86%	68	84%	70	66%	53
Pope-Vannoy Landing	c	c	c	8	50%	6	50%	6	b	5
Port Alsworth	22	55	2%	104	22%	159	26%	186	8%	175
Port Heiden	92	119	72%	119	78%	102	85%	100	84%	88
Ugashik	13	7	86%	11	82%	12	75%	4	75%	3
Remainder	19	31	16%	22	41%	19	21%	11	b	12
Subtotal	869	1,151	77%	1,362	78%	1,269	72%	1,157	b	1,039
Total	5,195	6,573	65%	7,542	71%	7,113	74%	6,858	b	6,218

Sources Alaska Department of Labor and Workforce Development (ADLWD) Research and Analysis Section: see "Decennial Census Data for Alaska," <http://live.laborstats.alaska.gov/cen/hist.cfm> (accessed March 2025) for 1980, 1990, 2000, and 2010; and "Alaska Population Estimates, Places and Other Areas: Cities and Census Designated Places (CDPs), 2020 to 2024," <https://live.laborstats.alaska.gov/data-pages/alaska-population-estimates> (accessed October 2025) for 2020 and 2024.

- a. The community of Ekuk is now counted with neighboring Clarks Point since the only resident is a cannery security guard.
- b. The estimated Alaska Native population percentages for the 2020 U.S. Census count were unavailable at the time this table was developed due to the October 2025 federal government shutdown.
- c. In the 1980 and 1990 U.S. Census counts, Pope-Vannoy Landing residents were counted with the remainder of the Lake and Peninsula Borough.
- d. Port Heiden is in the Alaska Peninsula Management Area; Chignik, Chignik Lagoon, Chignik Lake, Ivanof Bay, and Perryville are part of this borough but are in the Chignik Management Area and are excluded from this table. The "remainder" may include some population living outside the Bristol Bay Management Area.

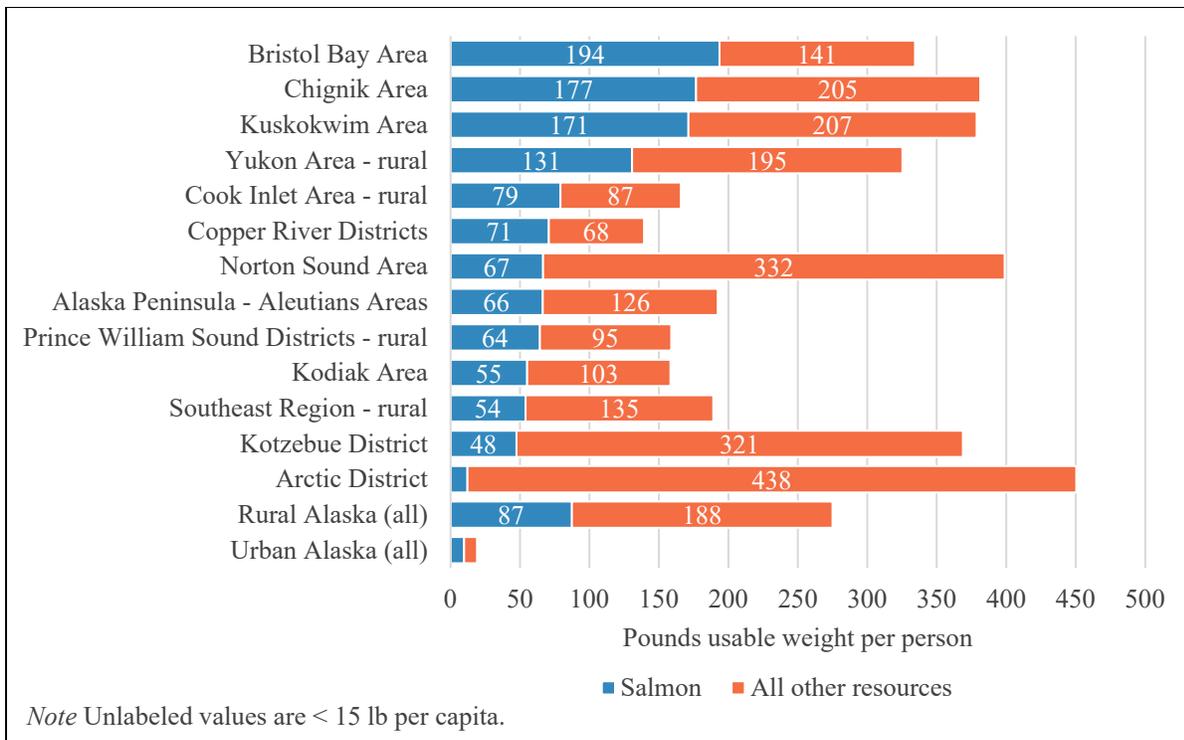


Figure 1-2.—Estimated noncommercial harvests of salmon and other resources in pounds usable weight per person, by fishery management area place of residence, 2014.

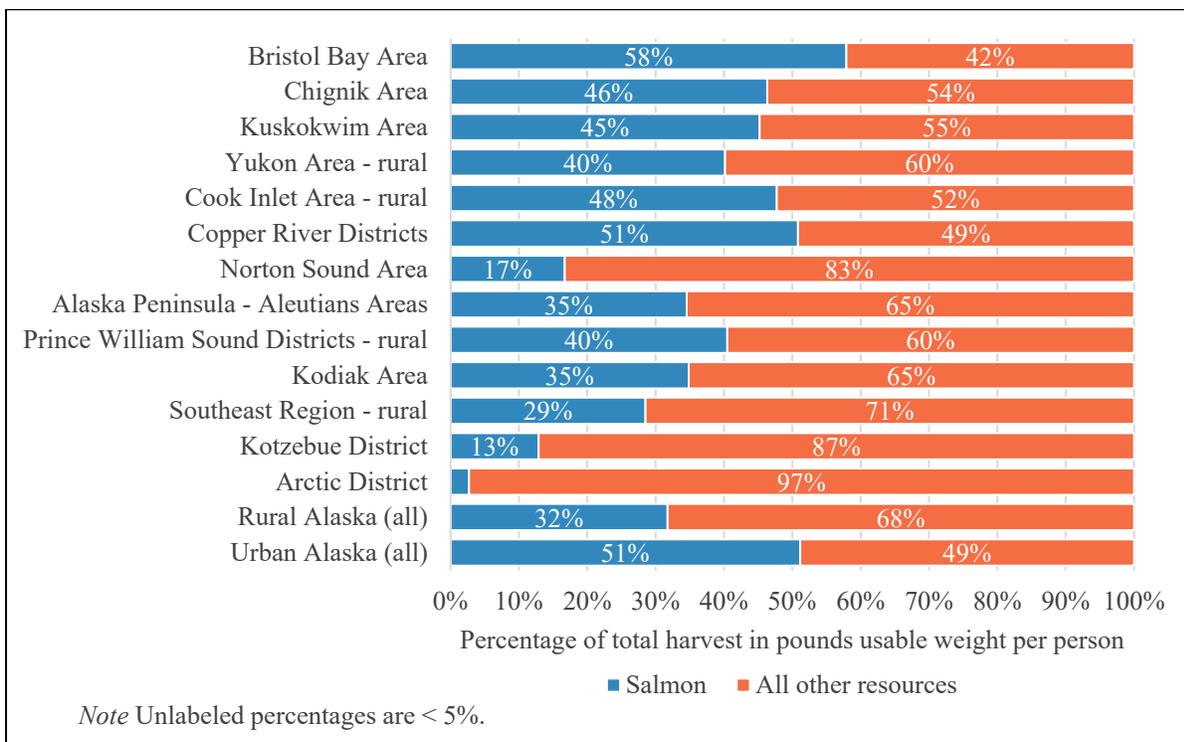


Figure 1-3.—Percentage of total noncommercial harvest in pounds usable weight per person composed of salmon and other resources, by fishery management area place of residence, 2014.

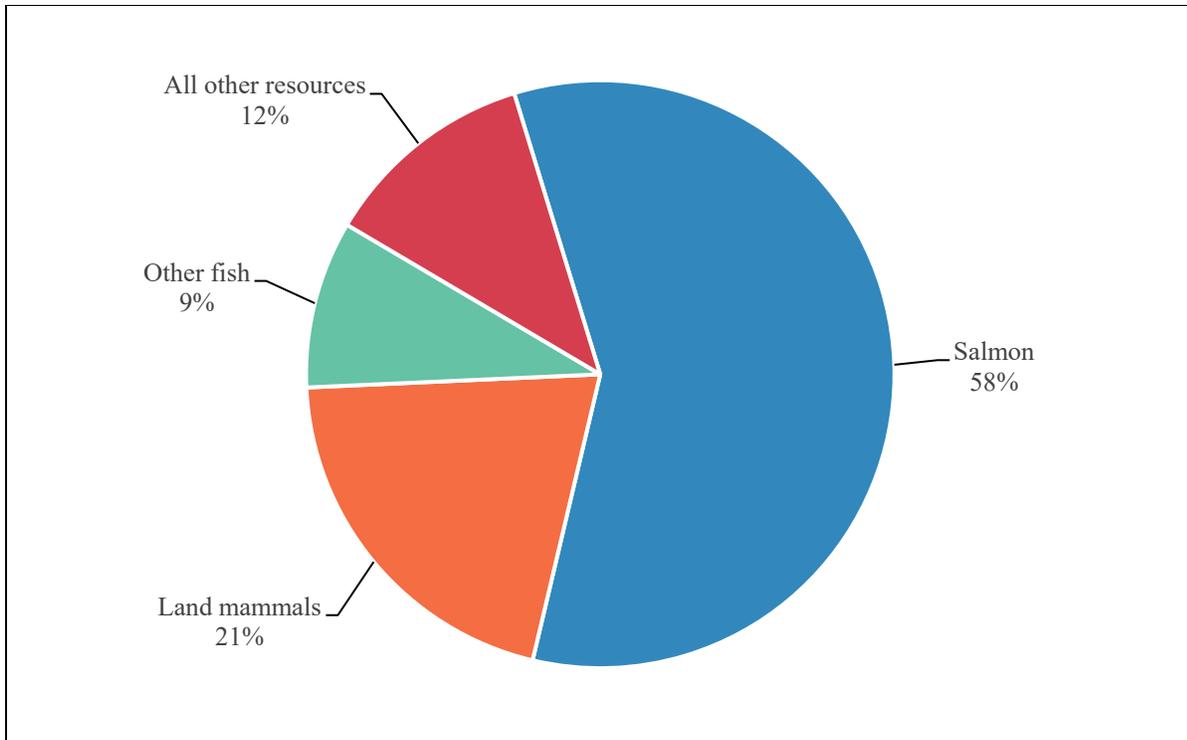


Figure 1-4.—Composition of wild food harvests, Bristol Bay Area, Alaska, 1987–2018.

THE BRISTOL BAY AREA SUBSISTENCE SALMON FISHERIES

Regulations

The board has found that all finfish (including salmon) support customary and traditional (subsistence) uses in the BBA (5 AAC 01.336). In 1993, the board established a range of 157,000–172,171 salmon as the amount reasonably necessary for subsistence uses (ANS). In 2001, the ANS finding was amended to specify that, of the total ANS, 55,000–65,000 Kvichak River drainage sockeye salmon *O. nerka* (excluding Alagnak River stocks) were necessary to provide a reasonable opportunity for subsistence uses. The board has not established an ANS for king salmon in any portion of the BBA. The ANS provides the board with a guideline for the typical numbers of fish harvested for customary and traditional uses under normal conditions. Harvests for customary and traditional uses may fall below an ANS range for many reasons: fishing regulations, changes in abundance or distribution, or changes in human use patterns, to name just a few. Harvests in the BBA have been below the lower end of the ANS range every year since 1995 (Table 1-2).

For historical context, subsistence fishing periods were tied to commercial fishery opening dates when the subsistence permit system began in 1960 (5 AAC 104.90 to 5 AAC 104.93) (Morris 1985:126). In 1969, the first weekly fishing period was established in the Naknek River drainage, which opened subsistence fishing for one 24-hour period and closed fishing for the remaining six days. This restriction was put in place to reduce alleged illegal fishing and resulted in most subsistence fishers at that time choosing to retain their subsistence fish from their commercial catch (Morris 1985:128; Nelson 1970).⁵ This regulation was

5. Contemporarily, some commercial fishermen still retain fish from their commercial catches. This “homepack” is on a smaller scale than subsistence harvests; over the last 10 years (2015–2024), approximately 4,081 salmon were retained annually in Bristol Bay driftnet fisheries, and 2,404 salmon were retained in the setnet fisheries (ADF&G 2025:5). These fish are not considered in ANS calculations.

repealed in 1971 (5 AAC 06.920, Register 37). In 1974 the Nushagak District restricted subsistence fishing for three 24-hour periods between June 16 through July 17 (5 AAC 06.920). No historical reference was found for this restriction, but it may be related to a similar condition as the Naknek River restriction. Anecdotal evidence suggests that waste of salmon by inexperienced subsistence fishers and an increased human population in the early 1980s and onward for the Dillingham area prompted restrictions by day and time in the subsistence fishery.

In 2016, the board adopted Global Positioning System (GPS) coordinates for all boundaries of the Nushagak District, which clarified subsistence areas and boundaries (5 AAC 01.310(d)) (Elison et al. 2018). Starting in the 2017–2018 regulatory year, subsistence fishing in the Naknek-Kvichak, Ugashik, and Egegik districts opened seven days per week, repealing the 24-hour subsistence openers that had previously characterized those areas (5 AAC 01.310(e), repealed 4/16/2016). The following is a synopsis of the key provisions of state subsistence salmon fishing regulations for the BBA in place in 2024 (see 5 AAC 01.300 to 5 AAC 01.320).

- Permits: Required. Limit of one per household (Appendix A). Must be returned with a record of harvest including if the permit was not fished.
- Seasonal limits: With one exception, none established in regulation. The exception is in the Naknek[-Kvichak] District, where there is an annual possession limit of 200 sockeye salmon taken after August 15.
- Gear: Drift and set gillnets in waters open to commercial fishing. Set gillnets only in other waters, with certain exceptions. Nets may be up to 25 fathoms in length except in the Naknek, Egegik, and Ugashik rivers, in the Dillingham beach areas, and during emergency openings in the Nushagak District, where they may be no more than 10 fathoms in length. Drift gear, limited to 10 fathoms in length, and spears may be used in the Togiak River. Subsistence fishing for salmon from shore by dip net is allowed in the Igushik, Weary, and Snake rivers upstream of the commercial fishing district, in parts of the Wood River, and also in Dillingham beach areas (see flyer that is available from the Dillingham ADF&G office in Appendix B). Subsistence fishing by hook and line, unless through the ice, is prohibited. In locations specified by regulations, harvest of salmon is also allowed by spear, gillnet, and beach seine.
- In 1998, the board adopted new regulations allowing for the taking of “redfish” (spawning sockeye salmon) in portions of the BBA (ADF&G 1999:38). Beach seine, spear, dip net, and gillnet are allowable gear types in various sections of Naknek Lake and at Johnny’s Lake and the mouth of the Brooks River during the redfish season.
- Seasons: Except as follows, subsistence fishing is open at any time.
 - In areas open to commercial fishing, except for special harvest areas: from May 1–31 and October 1–31, from 9:00 a.m. Monday to 9:00 a.m. Friday; from June 1–September 30, during open commercial fishing periods. When the district is closed to commercial fishing, subsistence is also closed except for the Nushagak District where the commissioner, by emergency order, shall provide for subsistence during periods of extended closure.

Brief Synopsis of Federal Subsistence Fishing Regulations

Federal subsistence fishing regulations apply on federal public lands, which include waters within or adjacent to the Togiak National Wildlife Refuge (NWR), Becharof NWR, Alaska Peninsula NWR, Alagnak Wild and Scenic River corridor, Katmai National Preserve (not Park), and the Lake Clark National Park and Preserve. Subsistence regulations on federal public lands in Bristol Bay closely follow state statutes and regulations, and permits are required for all federally qualified subsistence users fishing for salmon. Unlike state regulations, there is no limit for salmon for residents of the Naknek and Kvichak River

drainages under federal subsistence regulations. Subsistence salmon can also be harvested by snagging (by handline or rod and reel), without a permit, in Lake Clark, including its tributaries.

The Subsistence Permit Program

As noted above, subsistence salmon fishers in the BBA are required to obtain an annual household subsistence salmon fishing permit from the department. These permits are issued free of charge and only to Alaska residents. The permit includes a harvest calendar for recording daily harvests by species and location. These permits are available at the ADF&G online store (since 2021), department offices in Dillingham, King Salmon, and Anchorage, and from vendors in most Bristol Bay communities. The divisions of Subsistence and Commercial Fisheries share the responsibility of administering the Bristol Bay subsistence salmon permit program.

Since 1963, subsistence salmon harvest data, based on permit returns, have been reported in the department's Bristol Bay Annual Management Report (AMR) series prepared by the Division of Commercial Fisheries. In 1983, responsibility for data entry and analysis for the permit program transferred to the Division of Subsistence. To obtain high permit return rates, division staff mail three reminder letters to permit holders, visit Bristol Bay communities, and contact permit recipients by telephone, as time and funding permit.

Most households in the BBA that obtain salmon permits return them along with the harvest record on the back of the permit. In recent years (2019–2023) the permit return rate has decreased to an average of 65% from a historical average of 85% (Table 1-2). Reasons for the decrease in permit return rates may stem from changing the location of permit administration to the Anchorage ADF&G office, or a decline in division outreach to Bristol Bay communities concerning permits. The observed decline in harvests predates the decline in permit return rates and the division does not believe that the recent lower return rates are influencing the overall salmon harvest estimates.

Participation

Figure 1-5 illustrates the number of subsistence permits issued for the BBA, and number of salmon harvested per permit, from 1985 through 2024. The historical average from 1985–2023 of Bristol Bay subsistence permits issued is 1,101 annually, with the average harvest per permit estimated at 121 fish (Table 1-2). Since the early 1990s, the number of subsistence permits issued annually for Bristol Bay has been relatively stable, ranging between approximately 1,100–1,200 permits issued each year, but after 2019 the number of permits issued declined to 1,000, and declined again to fewer than 1,000 most recently. The 10-year (2014–2023) average was 1,068 permits issued and the average salmon harvest per permit for this date range is 99. In comparison, the recent five-year (2019–2023) average is 994 issued permits and 92 salmon harvested per permit. Appendix tables C-1 through C-5 report participation and harvest levels by district and location for 2024, the most recent year for which data are available. The Nushagak District reported the highest number of issued permits (587), followed by the Naknek-Kvichak District (334 permits).

The majority of participants in the Bristol Bay subsistence salmon fishery are year-round residents of Bristol Bay communities (Figure 1-6). For the 10-year period from 2014–2023, on average 75% of the issued BBA permits went to residents of Bristol Bay communities and 25% to other Alaska residents (Table 1-4). The percentage of permits going to residents in Bristol Bay has been slowly decreasing since the mid-2010s; in 2024, the department issued the smallest percentage of permits to residents of Bristol Bay communities (68%).

Subsistence Salmon Harvests

Figure 1-7 illustrates the estimated subsistence salmon harvests for the BBA for 1985–2024. The estimates are based on permit returns and then expanded using a weighting factor that takes into consideration

unreturned permits. The expansion method is: $Wt = Pi/Pr$, where Wt is the weight factor, Pi is the number of permits issued by community, and Pr is the number of permits returned by community.

The BBA historical average estimated harvest was 132,631 salmon, the 10-year (2014–2023) average was 105,749 salmon, and the recent five-year (2019–2023) average was 91,134 salmon (Table 1-2). These data show periods of relative stability but an overall decline in total subsistence salmon harvests in the BBA. Prior to the most recent low harvests, the lowest subsistence harvest for the BBA occurred in 2002 (109,587 fish) but rebounded the following year to 131,667 fish and harvests remained higher than 120,000 salmon for the next 12 years, with one exception in 2010. Note 2003–2009 were years of low sockeye salmon returns and subsistence harvests in the BBA remained at a lower level compared to in the mid-1980s through 1990s (Figure 1-7) (Fall et al. 2010; Salomone et al. 2011). The most recent high harvest year was 2014, with 134,775 fish harvested (Table 1-2). Since then, harvests have generally declined to a record low of 85,911 fish in 2023. Harvests were slightly higher in 2024 (92,996 salmon).

The average harvest per permit has also declined over time (Figure 1-8; Table 1-2). A decline was especially noticeable from the late 1980s through the early 2000s. Since then, average harvests have fluctuated, but have never reached the high harvests per permit seen in the 1980s or 1990s. From 1985 through 2023, fishers harvested an average of 121 salmon per permit (Table 1-2). The 10-year average for 2014–2023 was substantially lower at 99 fish per permit. More recently there has been a smaller decline with an average of 92 fish harvested per permit from 2019–2023. Within the BBA, average subsistence salmon harvests per permit differ by district. From 2015–2024, an average of 119 salmon were harvested per permit in the Naknek-Kvichak District (Figure 1-9; Table 1-3). Similarly, in the Togiak District, subsistence fishers harvested an average of 116 salmon per permit. In the remaining three districts, less than 85 fish were harvested per permit: 84 in the Nushagak District, 64 in Ugashik District, and 54 in the Egegik District.

As noted above, subsistence salmon harvests in the BBA have been below the lower end (157,000 salmon) of the ANS range since 1995. During this time period, there have not been restrictions on subsistence salmon harvesting opportunities that would account for the decrease in harvests. Sockeye salmon stocks in Bristol Bay appear to be strong; since 2004, sockeye salmon escapements have generally met escapement goals in all systems where ranges have been established (Elison et al. 2025:58). In contrast, king salmon run size has declined in the Nushagak River since 2017 and has not met escapement goals in most years since. However, there are likely a multitude of other factors contributing to not achieving the ANS in so many years, and different factors may be at play during different time periods. For example, most BBA residents had stopped using dog teams by the 1990s, which meant less need for salmon harvests to support those teams. A couple of decades later, the Kvichak River sockeye salmon run was listed as a stock of concern from 2001 through 2012, and fishers in that watershed may have had difficulty harvesting the salmon needed in those years due to abundance levels. More recently, ethnographic findings have indicated changing patterns of participation in salmon harvesting activities. For example, in Nondalton, interviews for research project years 2001, 2007, and 2021 documented observations from local residents that fewer people were participating in activities at fish camp and generally spending less time at camp, and the resulting concerns about how less participation was affecting intergenerational transmission of knowledge about salmon harvesting. While salmon retained from commercial catches do not count toward the annual subsistence harvest record that determines whether ANS was achieved, declining commercial fisheries participation may also be affecting residents' ability to participate in subsistence salmon harvesting activities, either through the loss of necessary equipment (i.e., commercial vessels) or of income to support subsistence activities. In addition to the variety of factors that likely influence harvest levels, there is inter-regional variability in harvesting trends. As noted earlier, harvests in the Naknek-Kvichak District and the Nushagak District account for the majority of total salmon harvested in the BBA. In the Nushagak District, salmon harvests have been relatively stable since the early 1990s. In the Naknek-Kvichak District, there has been a sharp decline in the number of permits issued and the estimated salmon harvest. Additionally, from 2011–2020, the salmon harvest per permit in the Nushagak District was similar to the value for 2015–2024 (87 salmon and 84, respectively) while in the Naknek-Kvichak District there was a decline from an

average of 131 salmon in 2011–2020 to 119 salmon in 2015–2024 (Jones and Neufeld 2022:21) (Figure 1-9). Further research and analysis are needed to better understand what factors are driving this decline.

Subsistence fishers in the BBA harvest sockeye salmon more than any other species, followed by king, coho, chum, and pink salmon (Table 1-2). This composition has remained relatively stable over time. Figure 1-10 illustrates the composition of the 10-year (2015–2024) average subsistence salmon harvest for all of the BBA; sockeye salmon composed 80% of the harvest and king salmon 10%. Harvests of other species each composed 6% or less of the overall harvest. Table 1-3 provides the average subsistence salmon harvest by species for the 10-year period spanning 2015–2024, broken out by the five Bristol Bay districts. Figure 1-11 presents what proportion each district, based on issued permits, contributed to the average harvest of total salmon for 2015–2024. The Nushagak District accounted for the largest portion of the subsistence harvest at 47% (an estimated 46,132 salmon on average), followed closely by the Naknek-Kvichak District at 46% (45,488 salmon). Of the remaining districts, Togiak harvests composed an additional 5% of the BBA harvest while harvests from the Egegik and Ugashik districts each accounted for 1%.

In addition to BBA residents composing the majority of the BBA permit holders, the majority of the BBA subsistence salmon harvest is taken by residents of the BBA (Figure 1-12). During the recent 10-year period (2014–2023), 84% of the total harvest was taken by local permit holders (who accounted for 75% of the permits), and 16% by other Alaska residents (who accounted for 25% of the permits) (Table 1-4).

Table 1-2.—Estimated subsistence salmon harvests, Bristol Bay Area, Alaska, 1985–2024.

Year	Permits		Estimated salmon harvest					Total	Salmon per permit
	Issued	Returned	King	Sockeye	Coho	Chum	Pink		
1985	1,015	808	9,737	142,755	8,122	5,776	825	167,215	165
1986	930	723	14,893	129,487	11,005	11,268	7,458	174,112	187
1987	996	866	14,424	135,782	8,854	8,161	673	167,894	169
1988	938	835	11,848	125,556	7,333	9,575	7,341	161,652	172
1989	955	831	9,678	125,243	12,069	7,283	801	155,074	162
1990	1,042	870	13,462	128,343	8,389	9,224	4,455	163,874	157
1991	1,194	1,045	15,245	137,837	14,024	6,574	572	174,251	146
1992	1,203	1,028	16,425	133,605	10,722	10,661	5,325	176,739	147
1993	1,206	1,005	20,527	134,050	8,915	6,539	1,051	171,082	142
1994	1,193	1,019	18,873	120,782	9,279	6,144	2,708	157,787	132
1995	1,119	990	15,921	107,717	7,423	4,566	691	136,319	122
1996	1,110	928	18,072	107,737	7,519	5,813	2,434	141,575	128
1997	1,166	1,051	19,074	118,250	6,196	2,962	674	147,156	126
1998	1,234	1,155	15,621	113,289	8,126	3,869	2,424	143,330	116
1999	1,219	1,157	13,009	122,281	6,143	3,653	420	145,506	119
2000	1,219	1,109	11,547	92,050	7,991	4,637	2,599	118,824	97
2001	1,226	1,137	14,412	92,041	8,406	4,158	839	119,856	98
2002	1,093	994	12,936	81,088	6,565	6,658	2,341	109,587	100
2003	1,182	1,058	21,231	95,690	7,816	5,868	1,062	131,667	111
2004	1,100	940	18,012	93,819	6,667	5,141	3,225	126,865	115
2005	1,076	979	15,212	98,511	7,889	6,102	1,098	128,812	120
2006	1,050	904	12,617	95,201	5,697	5,321	2,726	121,564	116
2007	1,063	917	15,444	99,549	4,880	3,991	815	124,679	117
2008	1,178	1,083	15,153	103,583	7,627	5,710	2,851	134,924	115
2009	1,063	950	14,020	98,951	7,982	5,052	442	126,447	119
2010	1,082	979	10,852	90,444	4,623	4,692	2,627	113,238	105
2011	1,122	1,039	14,106	101,017	7,493	3,794	333	126,744	113
2012	1,107	932	12,136	100,728	3,837	4,007	1,874	122,582	111
2013	1,162	986	12,858	98,765	8,635	5,173	333	125,764	108
2014	1,158	1,031	17,417	99,008	8,984	6,677	2,689	134,775	116
2015	1,169	1,072	13,874	99,535	7,659	3,573	458	125,100	107
2016	1,172	1,057	18,712	85,989	6,255	5,243	4,945	121,144	103
2017	1,110	1,000	12,985	89,704	8,154	4,907	553	116,303	105
2018	1,105	925	13,758	78,666	6,913	4,030	1,135	104,502	95
2019	1,106	860	11,488	75,320	6,219	3,451	398	96,876	88
2020	1,018	765	9,369	78,679	5,493	2,425	595	96,561	95
2021	1,019	528	5,099	75,007	5,611	1,252	463	87,433	86
2022	923	544	8,367	75,092	2,651	1,511	1,267	88,888	96
2023	902	512	3,969	75,223	5,149	1,313	258	85,911	95
2024 ^a	963	527	4,596	82,820	2,917	1,623	1,040	92,996	97

-continued-

Table 1-2.—Page 2 of 2.

Year	Permits		Estimated salmon harvest					Total	Salmon per permit
	Issued	Returned	King	Sockeye	Coho	Chum	Pink		
5-year average (2019–2023)	994	642	7,658	75,864	5,025	1,990	596	91,134	92
10-year average (2014–2023)	1,068	829	11,504	83,222	6,309	3,438	1,276	105,749	99
Historical average (1985–2023)	1,101	939	13,907	104,010	7,521	5,301	1,892	132,631	121

Source ADF&G Division of Subsistence, ASFDB 2025 (ADF&G 2025).

a. Data are preliminary.

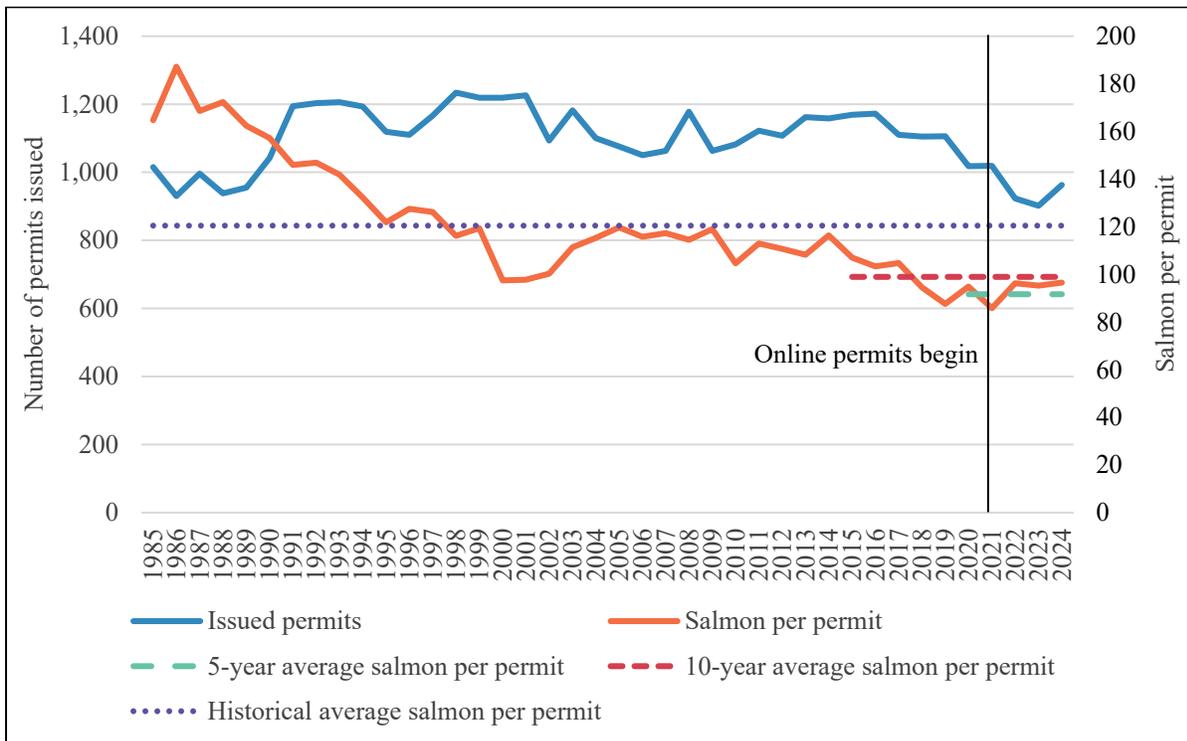


Figure 1-5.—Number of subsistence salmon permits issued and subsistence salmon harvest per permit, Bristol Bay Area, Alaska, 1985–2024.

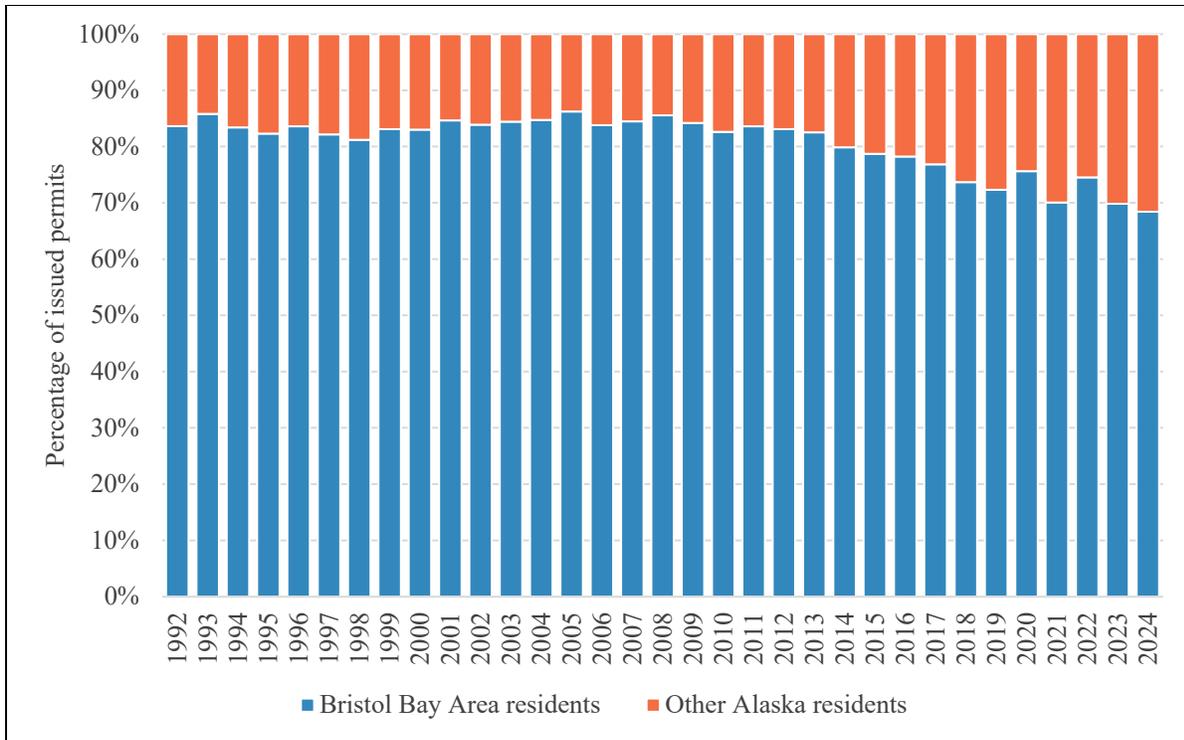


Figure 1-6.—Percentage of subsistence salmon harvest permits issued by area of residence, Bristol Bay Area, Alaska, 1992–2024.

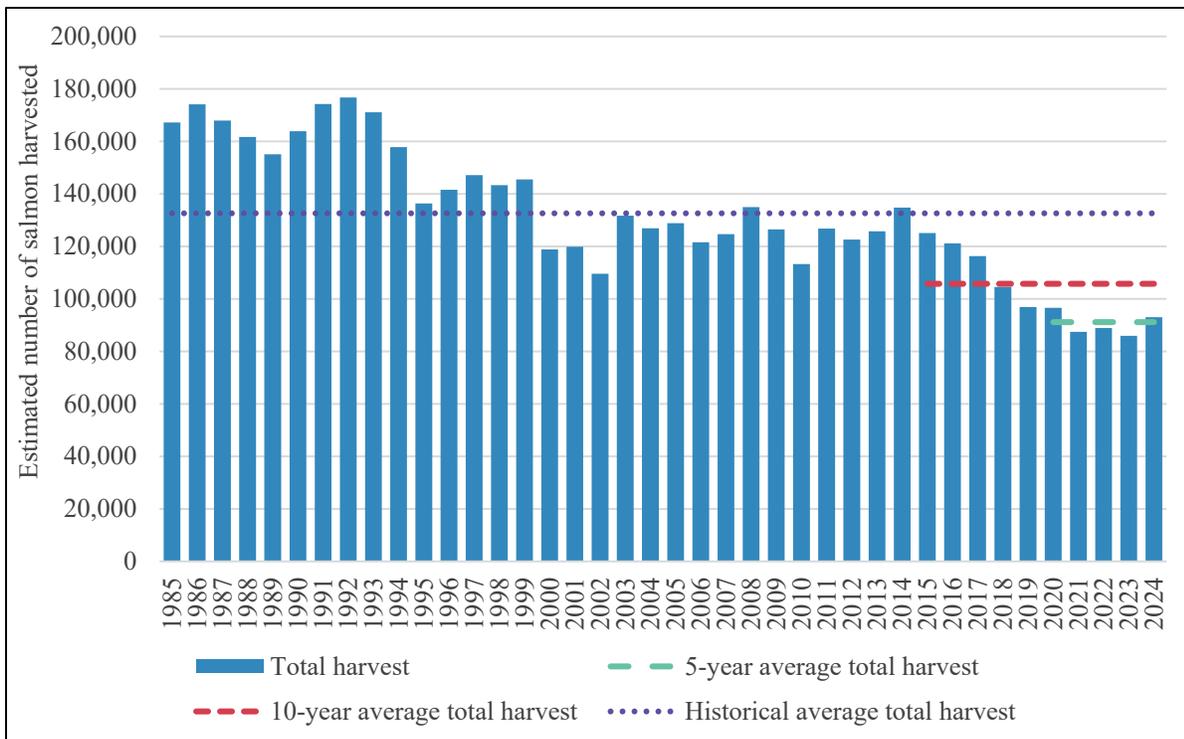


Figure 1-7.—Estimated subsistence salmon harvests, Bristol Bay Area, Alaska, 1985–2024.

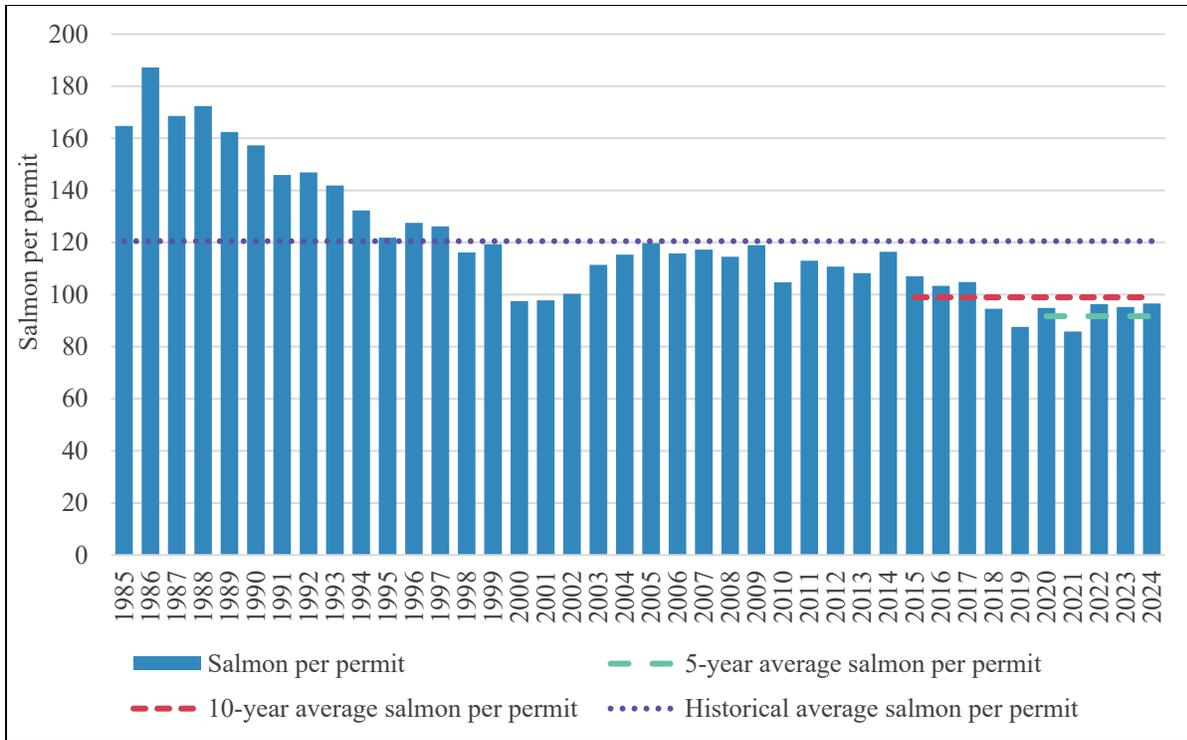


Figure 1-8.—Subsistence salmon harvest per permit, Bristol Bay Area, Alaska, 1985–2024.

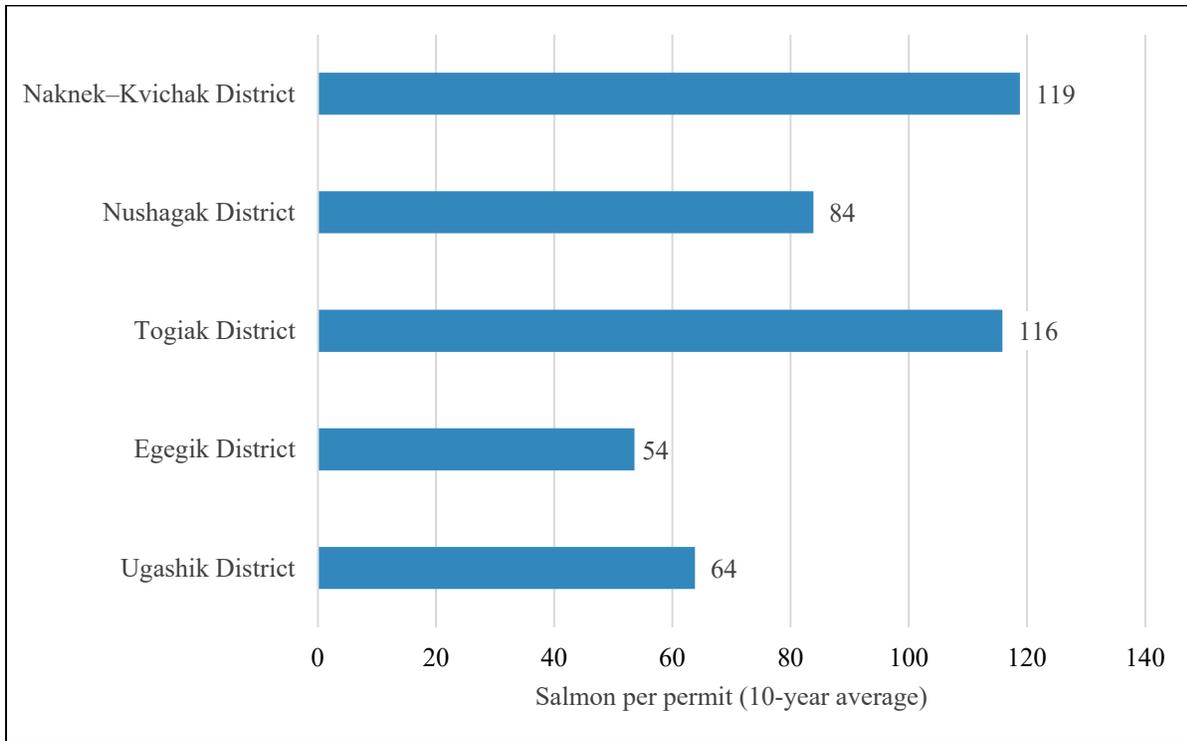


Figure 1-9.—Ten-year average subsistence salmon harvest per permit, by district, Bristol Bay Area, Alaska, 2015–2024.

Table 1-3.—Ten-year average subsistence salmon harvests, by species and per permit, by district, Bristol Bay Area, Alaska, 2015–2024.

District	Permits issued	Average salmon harvest ^a					Total	Salmon per permit
		King	Sockeye	Coho	Chum	Pink		
Naknek–Kvichak District	383	513	43,983	651	176	165	45,488	119
Nushagak District	550	8,825	29,769	4,228	2,457	853	46,132	84
Togiak District	42	603	3,558	350	242	66	4,819	116
Egegik District	19	48	722	213	10	4	997	54
Ugashik District	11	36	554	98	5	3	696	64
Total Bristol Bay Area^b	1,049	10,222	81,604	5,702	2,933	1,111	101,571	97

Source ADF&G Division of Subsistence, Bristol Bay subsistence salmon permit database.

a. The data for 2024 used to calculate these averages are preliminary.

b. Totals may not equal the sum of component districts. Totals for Bristol Bay Area may not equal a sum of values for component districts because averages were calculated separately for each district and the overall combined total.

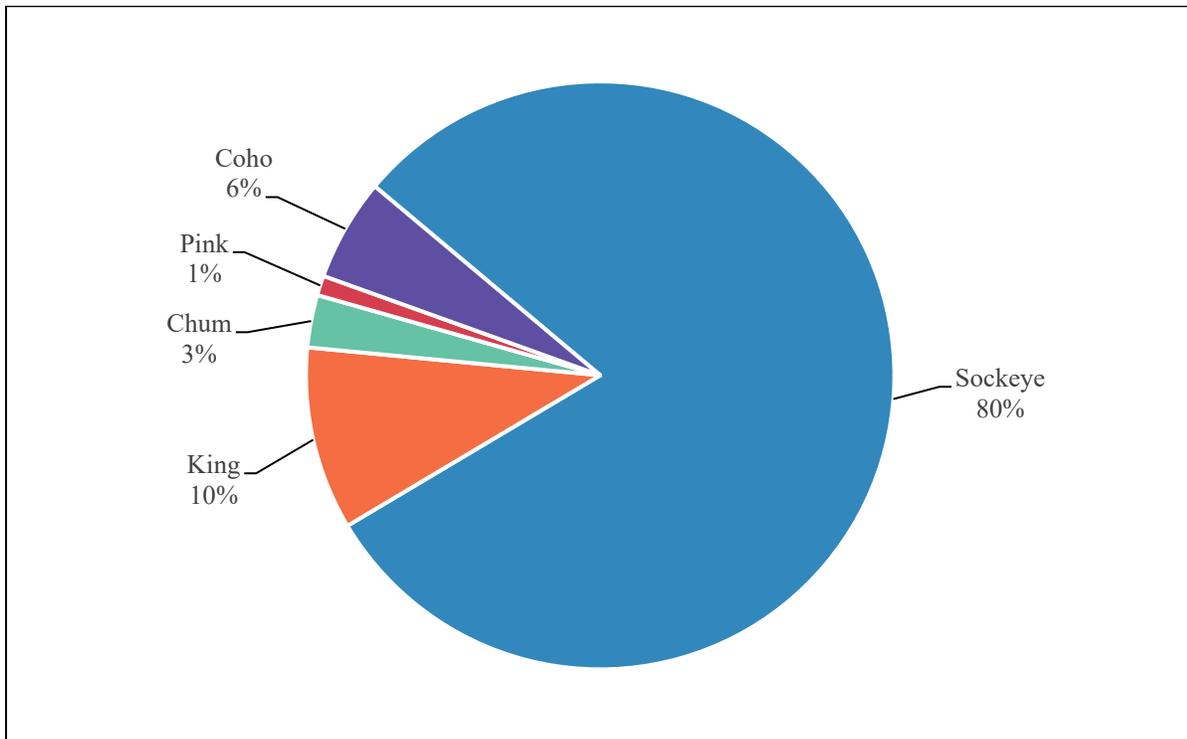


Figure 1-10.—Composition of 10-year average total subsistence salmon harvest, by species, Bristol Bay Area, Alaska, 2015–2024.

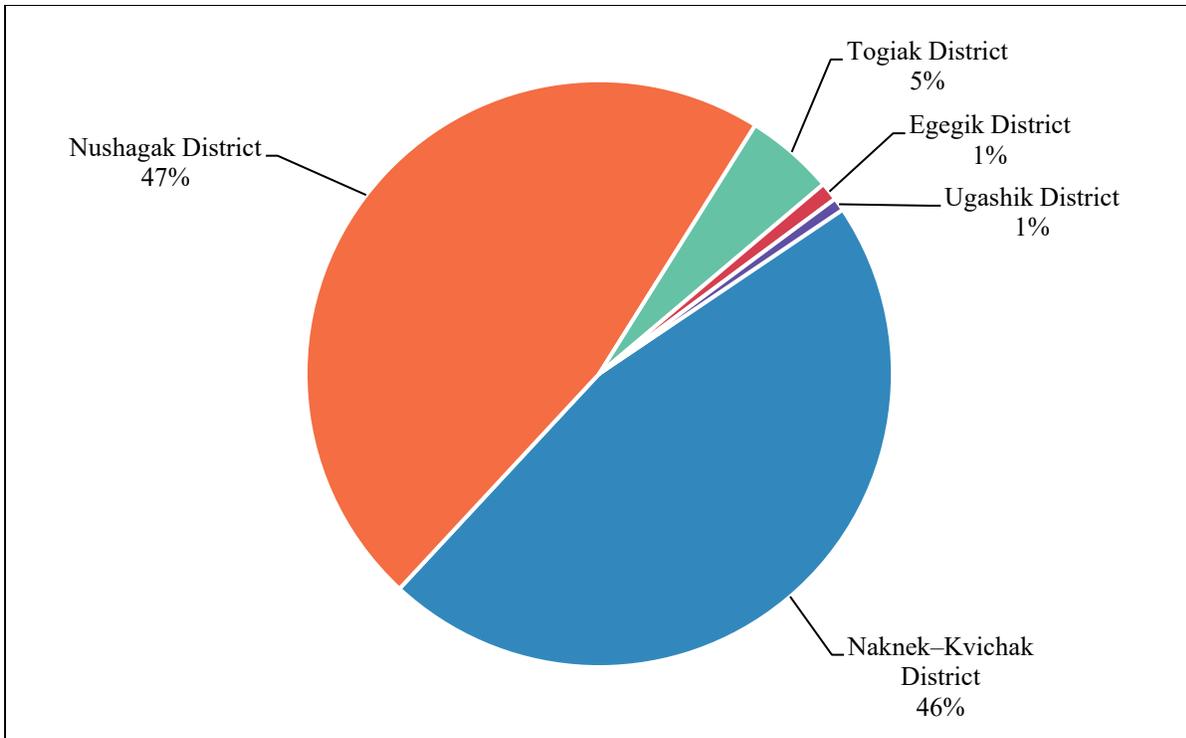


Figure 1-11.—Composition of 10-year average total subsistence salmon harvest, by district, Bristol Bay Area, 2015–2024.

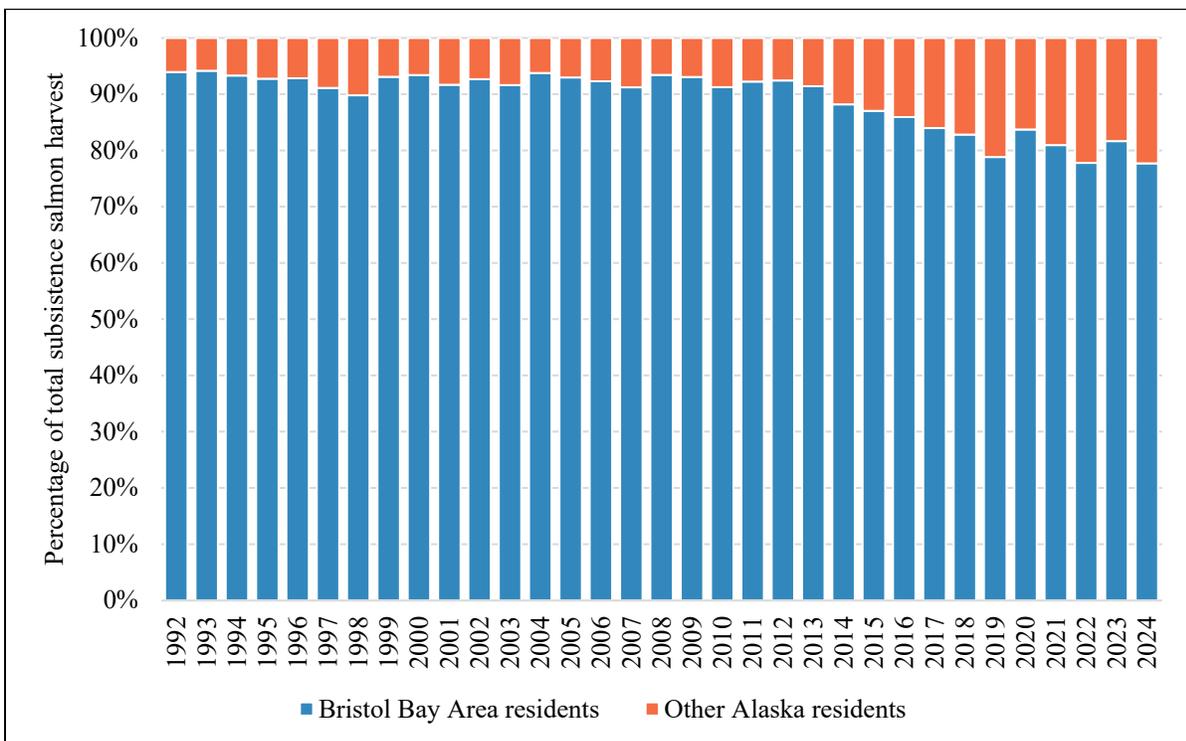


Figure 1-12.—Percentage of Bristol Bay Area subsistence salmon harvests by area of residence, 1992–2024.

Table 1-4.--Number of permits issued and estimated subsistence salmon harvests, by area of residence, Bristol Bay Area, Alaska, 1992–2024.

Year	Bristol Bay Area residents				Other Alaska residents				All Alaska residents	
	Permits issued		Estimated salmon harvest		Permits issued		Estimated salmon harvest		Permits issued	Estimated salmon harvest
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage		
1992	1,007	84%	168,232	94%	197	16%	10,887	6%	1,204	179,119
1993	1,035	86%	164,985	94%	171	14%	10,221	6%	1,206	175,206
1994	995	83%	147,525	93%	198	17%	10,598	7%	1,193	158,123
1995	921	82%	124,218	93%	198	18%	9,726	7%	1,119	133,944
1996	928	84%	132,130	93%	182	16%	10,206	7%	1,110	142,336
1997	958	82%	134,915	91%	208	18%	13,152	9%	1,166	148,067
1998	1,002	81%	128,314	90%	232	19%	14,590	10%	1,234	142,904
1999	1,013	83%	135,422	93%	206	17%	10,084	7%	1,219	145,506
2000	1,012	83%	110,990	93%	207	17%	7,833	7%	1,219	118,824
2001	1,038	85%	109,858	92%	188	15%	9,997	8%	1,226	119,855
2002	917	84%	101,543	93%	176	16%	8,044	7%	1,093	109,587
2003	998	84%	120,629	92%	184	16%	11,039	8%	1,182	131,668
2004	932	85%	118,936	94%	168	15%	7,929	6%	1,100	126,865
2005	928	86%	119,745	93%	148	14%	9,066	7%	1,076	128,811
2006	880	84%	112,196	92%	170	16%	9,368	8%	1,050	121,564
2007	898	84%	113,727	91%	165	16%	10,952	9%	1,063	124,679
2008	1,008	86%	126,040	93%	170	14%	8,884	7%	1,178	134,924
2009	895	84%	117,666	93%	168	16%	8,781	7%	1,063	126,447
2010	894	83%	103,331	91%	188	17%	9,907	9%	1,082	113,238
2011	938	84%	116,890	92%	184	16%	9,854	8%	1,122	126,744
2012	920	83%	113,320	92%	187	17%	9,262	8%	1,107	122,582
2013	959	83%	114,982	91%	203	17%	10,783	9%	1,162	125,764
2014	925	80%	118,849	88%	233	20%	15,926	12%	1,158	134,775
2015	920	79%	108,885	87%	249	21%	16,215	13%	1,169	125,100
2016	917	78%	104,107	86%	255	22%	17,037	14%	1,172	121,144
2017	853	77%	97,660	84%	257	23%	18,643	16%	1,110	116,303
2018	814	74%	86,555	83%	291	26%	17,947	17%	1,105	104,502
2019	800	72%	76,358	79%	306	28%	20,518	21%	1,106	96,876
2020	757	76%	80,851	84%	244	24%	15,711	16%	1,001	96,561

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Table 1-4.–Page 2 of 2.

Year	Bristol Bay Area residents				Other Alaska residents				All Alaska residents	
	Permits issued		Estimated salmon harvest		Permits issued		Estimated salmon harvest		Permits issued	Estimated salmon harvest
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage		
2021	714	70%	70,771	81%	305	30%	16,661	19%	1,019	87,433
2022	688	75%	69,136	78%	235	25%	19,752	22%	923	88,888
2023	630	70%	70,141	82%	272	30%	15,770	18%	902	85,911
2024 ^a	659	68%	72,244	78%	304	32%	20,752	22%	963	92,996
5-year average (2019–2023)	718	72%	73,451	81%	272	28%	17,682	19%	990	91,134
10-year average (2014–2023)	802	75%	88,331	84%	265	25%	17,418	16%	1,067	105,749
Historical average (1985–2023)	902	81%	111,853	90%	214	19%	12,609	10%	1,115	124,462

Source ADF&G Division of Subsistence, ASFDB 2025 (ADF&G 2025).

a. Data are preliminary.

2. NAKNEK-KVICHAK DISTRICT SUBSISTENCE SALMON FISHERY

COMMUNITIES AND POPULATION

Historically, subsistence salmon harvests in the Naknek-Kvichak District have been the largest within the BBA. There are eight year-round communities within the Kvichak River/Iliamna Lake watersheds (referred to in this chapter as simply Kvichak) and three communities within the Naknek River drainage. Table 1-1 shows the 2024 estimated populations for the Kvichak communities: Igiugig (63), Iliamna (109), Kokhanok (135), Levelock (57), Newhalen (163), Nondalton (105), Pedro Bay (42), and Port Alsworth (175). The most recent household subsistence surveys in Kvichak communities collected salmon harvest and use data for the following years: 2022 (Kokhanok and Igiugig), 2021 (Port Alsworth and Nondalton), 2007–2008 (Iliamna, Newhalen), 2005 (Levelock), and 2004 (Pedro Bay). Except for results for Kokhanok and Igiugig, these data may be found in their respective technical reports as well as in the online CSIS (Fall et al. 2006; 2010; Krieg et al. 2009; Sill et al. 2025). Results from the harvest surveys conducted in Kokhanok and Igiugig for 2022 are being compiled for a forthcoming technical report. Table 1-1 shows the 2024 estimated populations for the Naknek River drainage communities: King Salmon (301), Naknek (381), and South Naknek (59). The most recent household subsistence surveys in the Naknek River drainage communities collected salmon harvest and use data for 2017 and 2018 and those data may be found in Jones and Cunningham (2020) as well as in the online CSIS.

Table 2-1 shows the historical harvest of sockeye salmon by Kvichak community, based on permit holder place of residence, from 1985–2024, limited to fish harvested from the Kvichak. Virtually all the subsistence salmon harvest in the watershed is sockeye salmon; other salmon species are much less abundant upstream of the confluence of the Alagnak (Branch) River with the Kvichak River (Appendix Table C-1). Table 2-2 shows the harvest by species in the Naknek River drainage from 1997–2024. Sockeye salmon are the most harvested salmon species in the Naknek River drainage: this salmon species composed 91% of the historical (1997–2023) average, followed by coho salmon (3%), king salmon (3%), pink salmon (1%), and chum salmon (1%).

KVICHAK GENERAL PATTERNS OF SUBSISTENCE HARVESTS

The number of subsistence salmon permits the department issued by place of residence for Kvichak communities has been relatively stable since the early 1990s, when nonlocal residents were again allowed to obtain permits (ADF&G 1986:75–76; 1988:80–83; 1991:S62) (Table 2-3). However, the department continues to issue the majority of permits to local Kvichak residents. The long-term (1985–2023) average indicates that 83% of permits have been issued to local residents; this long-term average includes the years when only local watershed residents were eligible for permits (1986–1989). More recently (2019–2023), an average of 80% of permits have been issued to local residents. Since approximately 2014, there has been a decline in participation in the subsistence salmon permit program for local fishers, and a similar, though less pronounced, decline for nonlocal fishers beginning in 2020 (Figure 2-1). For local residents, it is unclear what factors are driving the decline in participation, but fewer permits being issued may relate to administrative changes affecting outreach in local communities, including moving permit program administration from the division’s office in Dillingham to the Anchorage office, and the departure of long-time area staff. For nonlocal residents, 2020 coincided with the beginning of the COVID-19 pandemic and the switch to online permit distribution.

Estimated subsistence sockeye salmon harvests from the Kvichak for the period 1985–2023 average an estimated 48,057 sockeye salmon (Table 2-1). Similar to the proportion of local residents obtaining subsistence salmon permits, the majority of the harvest in this watershed is by local residents (Figure 2-2). As shown in Figure 2-3, subsistence sockeye salmon harvests in this drainage have been declining since the mid-1980s. Harvests declined markedly from the early 1990s to the early 2000s, with an especially low

harvest in 2001, when local residents reported that salmon returned “in ‘bunches’ and ‘spurts,’ unlike the steadier runs of previous years” (Holen et al. 2005:7). Although 2001 and 2002 were years in which the department estimated two of the lowest harvests of sockeye salmon (32,808 and 33,001, respectively), beginning in 2016 the lowest annual harvests to date have occurred (Table 2-1). The recent five-year (2019–2023) average subsistence harvest was 18,271 fish. In comparison, Kvichak River sockeye salmon were listed as a stock of yield concern from 2001 through 2012, but the run has improved and has consistently met escapement goals since 2004 (Elison et al. 2025; Morstad and Brazil 2012). Opportunity to harvest sockeye salmon for subsistence in the watershed has not been restricted in regulation or by emergency order. Some of the decline in harvest is likely related to the decline in overall permits issued.

As illustrated in Figure 2-3, average sockeye salmon harvests per subsistence permit in the Kvichak have also been declining in a similar pattern to total harvests. Per permit harvests significantly decreased in the early 2000s (from 267 salmon per permit in 1999 to 158 salmon per permit in 2001) but then increased and remained variable but stable through the late 2000s (ranging between 220 and 278 salmon per permit between 2003 and 2010). After a high of 253 sockeye salmon harvested per permit in 2012, harvests decreased until reaching a low of 134 sockeye salmon per permit in 2021. The number of sockeye salmon harvested per permit increased in 2022 and 2023, but remained lower than most previous years.

Table 2-1.—Estimated subsistence sockeye salmon harvests, by community based on permit holder place of residence, in numbers of fish, Kvichak River/Iliamna Lake drainages, Bristol Bay Area, Alaska, 1985–2024.

Year	Estimated sockeye salmon harvest										Total
	Igiugig	Iliamna/ Newhalen	Kokhanok	Levelock	Nondalton	Pedro Bay	Port Alsworth	Other Kvichak residents	Subtotal, local residents	Other Alaska residents	
1985	3,400	22,300	21,900	6,600	14,900	12,900	4,500	0	86,500	a	86,500
1986	1,600	17,000	18,300	6,400	6,600	6,700	3,300	0	59,900	a	59,900
1987	b	27,500	16,500	5,700	11,800	7,300	3,200	0	72,000	a	72,000
1988	b	29,800	14,400	3,500	20,700	5,500	3,200	0	77,100	a	77,100
1989	1,200	24,700	13,000	5,100	18,500	6,700	2,200	0	71,400	a	71,400
1990	2,200	18,800	12,400	4,700	27,300	6,600	3,200	0	75,200	1,400	76,600
1991	1,712	29,094	17,184	1,029	4,163	9,739	2,755	0	65,676	1,110	66,786
1992	1,056	29,633	11,477	4,374	13,163	6,932	2,954	0	69,589	2,559	72,148
1993	1,397	19,067	18,810	4,699	17,890	6,226	3,254	0	71,343	2,780	74,123
1994	1,201	15,553	15,771	1,467	15,246	8,747	3,074	0	61,059	3,284	64,343
1995	497	20,134	14,412	3,756	4,188	5,359	2,892	0	51,238	3,441	54,679
1996	2,309	14,787	14,011	1,120	11,856	5,219	3,263	0	52,565	2,307	54,872
1997	2,067	19,513	8,722	1,062	17,194	5,501	2,348	0	56,407	3,101	59,508
1998	1,659	16,165	10,418	2,454	13,136	3,511	2,678	0	50,021	3,635	53,656
1999	1,608	14,129	10,725	1,276	17,864	5,005	4,282	0	54,889	2,834	57,723
2000	1,981	6,679	7,175	1,467	11,953	1,815	3,200	0	34,270	2,720	36,990
2001	779	8,132	9,447	908	7,566	2,118	1,958	0	30,908	1,901	32,808
2002	2,138	9,417	9,847	625	5,508	2,687	1,201	0	31,423	1,578	33,001
2003	1,081	13,824	9,771	737	8,016	2,135	1,370	0	36,934	1,591	38,525
2004	1,026	21,652	11,869	1,000	8,789	4,803	2,455	0	51,594	1,631	53,225
2005	1,017	12,010	16,801	914	8,824	4,162	2,457	0	46,185	2,078	48,263
2006	1,252	11,488	19,028	0	8,885	4,319	2,418	0	47,390	2,460	49,850
2007	1,803	11,453	15,106	102	7,902	5,487	3,211	0	45,064	2,474	47,538
2008	1,558	13,569	14,755	30	8,917	4,884	3,307	0	47,020	2,543	49,563
2009	1,457	9,871	15,759	759	5,709	7,802	3,155	0	44,512	2,260	46,771
2010	2,901	8,815	13,973	940	3,185	2,609	3,250	0	35,673	5,015	40,688
2011	1,931	15,433	9,895	933	7,947	3,898	4,026	0	44,062	1,164	45,226
2012	2,608	12,933	16,530	750	9,247	4,028	4,420	0	50,516	1,855	52,371

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Table 2-1.–Page 2 of 2.

Year	Estimated sockeye salmon harvest										Total
	Igiugig	Iliamna/ Newhalen	Kokhanok	Levelock	Nondalton	Pedro Bay	Port Alsworth	Other Kvichak residents	Subtotal, local residents	Other Alaska residents	
2014	513	11,388	6,440	1,170	9,004	3,999	4,296	0	36,810	4,206	41,016
2015	1,153	9,691	8,098	398	8,722	2,519	6,588	0	37,169	2,109	39,279
2016	297	9,895	7,103	1,275	2,320	2,036	4,090	0	27,016	3,241	30,257
2017	700	6,403	5,430	168	6,548	1,678	3,638	0	24,565	3,282	27,847
2018	410	8,567	4,558	401	4,228	1,228	3,753	0	23,145	2,618	25,764
2019	412	6,872	4,708	38	1,367	1,731	3,778	0	18,904	2,931	21,835
2020	296	7,064	6,942	b	1,398	1,290	2,633	0	19,622	2,204	21,826
2021 ^c	202	4,600	4,049	b	784	825	2,865	0	13,325	884	14,209
2022 ^c	446	5,876	4,379	b	0	1,811	1,050	0	13,561	1,250	14,811
2023	1,223	5,207	3,681	b	4,211	358	3,383	0	18,062	611	18,673
2024 ^d	270	5,700	4,749	b	2,980	516	2,432	0	16,647	1,879	18,526
5-year average (2019–2023)	516	5,924	4,752	38	1,552	1,203	2,742	0	16,695	1,576	18,271
10-year average (2014–2023)	565	7,556	5,539	575	3,858	1,747	3,607	0	23,218	2,334	25,552
Historical average (1985–2023)	1,336	14,273	11,712	1,910	9,387	4,465	3,153	0	45,971	2,393	48,057

Sources Weiland et al. (2003:112) for 2000 to 2001; Morstad (2000:120) for 1985 through 1999; and ADF&G Division of Subsistence, ASFDB 2025 (ADF&G 2025) for 2002–2024.

Note Harvests are extrapolated for all permits issued, based on those returned. Harvest estimates from before 1991 are rounded to the nearest hundred fish. This table reports harvest estimates as they have appeared in Annual Management Reports. Harvest estimates prior to 1990 are based on the community where the permit was issued; estimates for 1990 to the present are based on community of residence and include fish caught only in the Kvichak River/Iliamna Lake drainages.

a. Only residents of the Naknek-Kvichak watershed could obtain permits prior to 1990.

b. No permits issued.

c. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

d. Data are preliminary.

Table 2-2.—Estimated subsistence salmon harvests, by species, in numbers of fish, Naknek River drainage, Bristol Bay Area, Alaska, 1997–2024.

Year	Estimated salmon harvest					Total
	King	Sockeye	Coho	Chum	Pink	
1997	2,304	27,354	1,408	422	214	31,702
1998	1,994	28,852	1,574	767	884	34,072
1999	568	27,592	701	528	159	29,549
2000	736	24,827	858	502	756	27,680
2001	769	24,092	707	551	343	26,463
2002	692	19,297	607	517	717	21,830
2003	1,080	22,948	672	233	195	25,128
2004	949	17,488	493	419	1,033	20,381
2005	886	20,947	742	205	132	22,912
2006	869	19,247	706	324	749	21,895
2007	664	22,364	1,078	375	260	24,742
2008	684	20,260	1,397	345	769	23,456
2009	350	21,199	648	135	36	22,368
2010	407	21,621	642	220	360	23,250
2011	525	21,938	666	208	55	23,392
2012	607	20,338	396	104	384	21,828
2013	349	19,613	375	225	85	20,647
2014	530	24,439	559	243	368	26,139
2015	604	30,305	792	234	126	32,062
2016	892	22,005	600	249	338	24,084
2017	742	22,770	1,330	316	155	25,314
2018	930	22,956	1,151	172	178	25,387
2019	570	21,514	544	281	90	22,999
2020	289	18,355	645	68	70	19,428
2021 ^a	202	15,374	413	127	87	16,203
2022 ^a	192	16,503	305	40	317	17,356
2023	296	17,104	308	126	88	17,922
2024 ^b	222	17,564	285	93	179	18,344
5-year average (2019–2023)	310	17,770	443	128	130	18,782
10-year average (2014–2023)	525	21,132	665	186	182	22,689
Historical average (1997–2023)	729	21,900	752	294	331	24,007

Source ADF&G Division of Subsistence, ASFDB 2025 (ADF&G 2025).

a. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

b. Data are preliminary.

Table 2-3.--Number of subsistence salmon permits issued, by place of residence for permit holders, Kvichak River/Iliamna Lake drainages, Bristol Bay Area, Alaska, 1985–2024.

Year	Number of permits issued											Total
	Igiugig	Iliamna/ Newhalen	Kokhanok	Levelock	Nondalton	Pedro Bay	Port Alsworth	Other Kvichak residents	Subtotal, local residents	Other Alaska residents		
1985	4	66	15	17	37	20	23	2	184	74	258	
1986	6	58	20	21	29	17	24	5	180	3	183	
1987	0	57	17	19	29	17	21	0	160	1	161	
1988	0	59	22	18	31	14	19	1	164	5	169	
1989	4	56	16	17	39	14	18	1	165	5	170	
1990	7	49	14	18	37	17	23	1	166	17	183	
1991	8	48	17	3	18	26	26	0	146	25	171	
1992	4	61	14	16	24	23	27	0	169	33	202	
1993	7	57	22	14	49	22	28	0	199	35	234	
1994	5	51	21	7	38	17	29	0	168	41	209	
1995	7	54	21	15	14	18	28	0	157	44	201	
1996	6	60	21	9	28	20	25	0	169	42	211	
1997	4	59	16	6	32	14	24	0	155	37	192	
1998	4	55	15	6	36	18	29	0	163	42	205	
1999	5	45	18	4	26	17	44	0	159	57	216	
2000	8	47	22	14	24	10	38	1	164	48	212	
2001	8	49	24	9	33	17	30	0	170	37	207	
2002	8	53	27	7	20	15	19	0	149	31	180	
2003	9	48	26	8	27	11	22	0	151	24	175	
2004	6	60	25	3	40	22	25	0	181	25	206	
2005	6	48	33	11	33	16	24	0	171	23	194	

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Table 2-3.–Page 2 of 3.

Year	Number of permits issued										Total
	Igiugig	Iliamna/ Newhalen	Kokhanok	Levelock	Nondalton	Pedro Bay	Port Alsworth	Other Kvichak residents	Subtotal, local residents	Other Alaska residents	
2006	7	44	28	2	25	21	24	0	151	28	179
2007	6	54	29	1	29	19	30	0	168	28	196
2008	7	58	25	1	28	18	38	0	175	40	215
2009	8	39	27	3	19	21	37	0	154	33	187
2010	11	36	26	7	13	20	43	0	156	24	180
2011	14	50	25	9	24	20	50	0	192	20	212
2012	11	43	26	2	30	15	50	0	177	30	207
2013	6	30	28	4	28	16	44	0	156	35	191
2014	6	41	13	9	29	16	47	0	161	39	200
2015	7	40	19	6	22	14	51	0	159	40	199
2016	6	28	23	7	9	13	38	0	124	35	159
2017	4	27	19	2	14	12	39	0	117	41	158
2018	3	35	18	4	14	16	42	0	132	44	176
2019	3	42	17	4	9	15	36	0	126	37	163
2020	2	36	20	0	6	9	41	0	114	38	152
2021 ^a	2	28	17	0	2	9	34	0	92	14	106
2022 ^a	4	28	17	0	1	12	15	0	77	20	97
2023	3	27	15	0	7	5	27	0	84	13	97
2024 ^b	3	25	31	0	10	5	18	0	92	17	109

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Table 2-3.–Page 3 of 3.

Year	Number of permits issued										Total
	Igiugig	Iliamna/ Newhalen	Kokhanok	Levelock	Nondalton	Pedro Bay	Port Alsworth	Other Kvichak residents	Subtotal, local residents	Other Alaska residents	
5-year average (2019–2023)	3	32	17	1	5	10	31	0	99	24	123
10-year average (2014–2023)	4	33	18	3	11	12	37	0	119	32	151
Historical average (1985–2023)	6	47	21	8	24	16	32	0	154	31	185

Source ADF&G Division of Subsistence, ASFDB 2025 (ADF&G 2025).

Note For 1985 and 1986, includes a small number of permits issued to local residents for fishing in areas outside of the Kvichak River drainage.

Note In 1986 through 1989, only local watershed residents were eligible for permits.

Note Due to updates to the database, these data may differ slightly from those published in Annual Management Reports.

Note For 2021–2024, submitted online permit data were revised due to an error that occurred during data post-processing; results differ from those published in Annual Management Reports.

a. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

b. Data are preliminary.

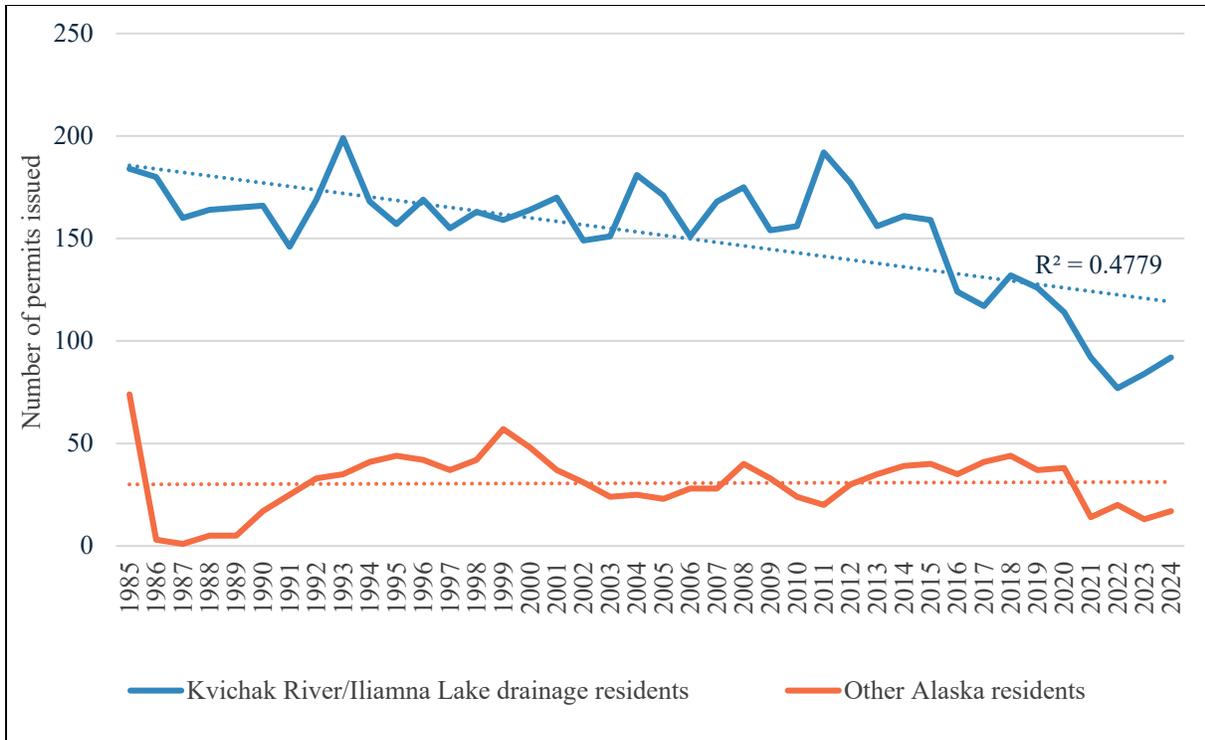


Figure 2-1.—Number of subsistence salmon permits issued, by residency type, Kvichak River/Iliamna Lake drainages, Bristol Bay Area, Alaska, 1985–2024.

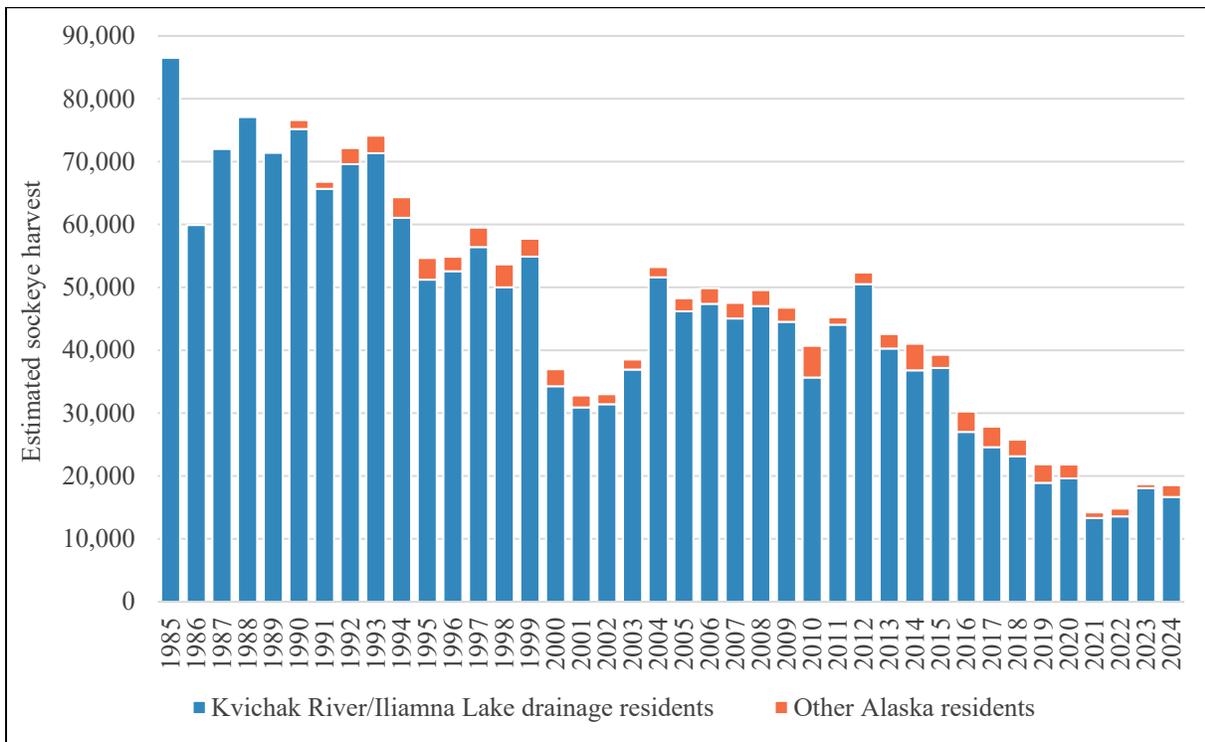


Figure 2-2.—Estimated subsistence sockeye salmon harvests, by residency type, Kvichak River/Iliamna Lake drainages, Bristol Bay Area, Alaska, 1985–2024.

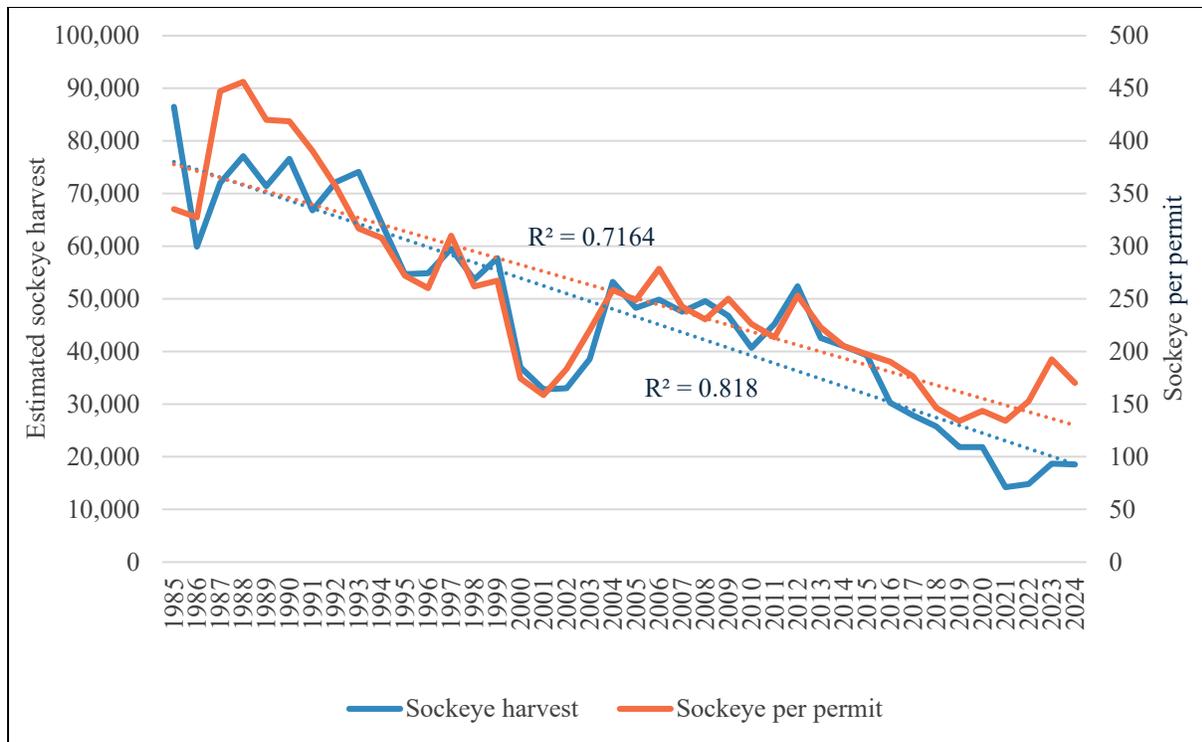


Figure 2-3.—Estimated subsistence sockeye salmon harvests and per permit harvest of sockeye salmon, in numbers of fish, Kvichak River/Iliamna Lake drainages, Bristol Bay Area, Alaska, 1985–2024.

HISTORY OF NAKNEK RIVER DRAINAGE SUBSISTENCE PERMITS

With the advent of statehood (1959), state regulations required households to obtain subsistence salmon fishing permits in Bristol Bay for harvesting salmon for subsistence (Morris 1985:126). The permit program was gradually introduced throughout Bristol Bay communities in the late 1960s to document the harvest of salmon for subsistence uses. Initially, compliance was low for Naknek River communities until people learned more about the permit process (Morris 1985:131).

From 1979 to 1980, there was a substantial increase in the number of people who obtained subsistence salmon permits for the Naknek River: in 1979, the department issued 243 permits, and in 1980, it issued 358 permits (Behnke 1980:5). Of the 358 permits issued in 1980, the department issued 41% to people with an address in a community outside of the BBA, mainly Anchorage and other Southcentral Alaska communities. There was also an increase in the number of permits issued to people who gave a General Delivery address in Naknek or King Salmon. Division staff at that time believed most of the people with General Delivery addresses were summer transients (Behnke 1980:5). In December 1980, the board adopted new regulations to require that subsistence salmon fishing permits for the Naknek River drainage be issued only to persons domiciled in the Naknek and Kvichak River drainages, and Naknek River drainage subsistence salmon fishing permits were only to be issued through the department's King Salmon office. The reasoning for the latter part of the regulation was “local [subsistence permit] issuance allows the staff to closely monitor the number of units fishing per area and to screen applicants for residency requirement” (Nelson et al. 1982:52).

Morris (1982:4) described the 1981–1984 permit regulations as follows:

1. Subsistence salmon fishing permits:
 - a. Were required and limited to one per household, 5 AAC 01.330 (a) and (c);

- b. Were to be “issued only to those persons domiciled in the Naknek and Kvichak River drainages”, 5 AAC 01.330 (d); and
- c. Were to be issued only through the Department of Fish and Game office in King Salmon, 5 AAC 01.300 (a) and (d).

In 1982, the board established a personal use fishery in the Naknek River, allowing nonlocal residents to fish for salmon under personal use regulations (Morris 1985:130). For two years (1985 and 1986) the subsistence fishery was open to all Alaska residents, but the eligibility regulations changed back to permitting only local residents for the next three years (1987–1989). As a result of the court case *McDowell et al. v. State of Alaska*, from 1990 to today, the state subsistence fishery is open to all Alaska residents; however, the provision that subsistence permits for the Naknek River drainage must be obtained from the department’s office in King Salmon remained in regulation (5 AAC 01.330) through 2022. Permits are currently available from some ADF&G offices, vendors in Bristol Bay communities, and online.

NAKNEK RIVER DRAINAGE GENERAL PATTERNS OF SUBSISTENCE HARVESTS

Table 2-4 presents the number of permits issued and the estimated subsistence salmon harvest, in numbers of fish, by Naknek River drainage community, based on permit holder place of residence, from 1997–2024, limited to fish harvested from the Naknek River drainage. With the exception of 2020 and 2021, the number of subsistence salmon permits issued in the Naknek River drainage has remained relatively stable since 1997. The lower-than-average 2020 and 2021 harvest amounts and number of permits issued may be the result of COVID-19 travel restrictions. For example, the number of permits issued to nonlocal Alaska residents in 2020 and 2021 (76 and 75 permits, respectively) was lower compared to the previous two years (109 permits in 2019 and 94 permits in 2018) (Table 2-5). In addition, during these years the online permit system did not request households to provide the anticipated fishing location; location data were provided only on returned permits. Therefore, the department was not able to develop estimates by area fished to account for harvests on unreturned permits.

Table 2-6 reports estimated subsistence salmon harvests based on permit return data from the Naknek River drainage for the period of 1997–2024. Figure 2-4 illustrates the total estimated salmon harvest and the per permit harvest for this same time period. From 1997–2019, in the Naknek River drainage, salmon harvests and salmon harvests per permit have remained relatively stable. Average annual harvests over the historical period (1997–2023) and the recent 10-year period (2014–2023) were between 22,000 and 24,000 fish (Table 2-4). Beginning in 2020, total harvests appear to have declined slightly, with the recent five-year average (2019–2023) harvest totaling 18,782 salmon. In contrast, salmon harvests per permit since 2019 have remained stable (Figure 2-4). As Table 2-6 and Figure 2-5 illustrate, sockeye salmon consistently compose the majority of the total salmon harvest in the Naknek River drainage (see also Appendix Table C-1). Sockeye salmon have consistently met escapement goals in the Naknek River since 2004 (Elison et al. 2025). Trends in sockeye salmon harvests mirror the trends in the total salmon harvest: the historical and most recent 10-year averages were similar, and the recent 5-year average was smaller (Table 2-2). The next two most harvested species are coho and king salmon; harvests of both these species appear to be declining with harvests in recent years among the lowest estimates on record.

NAKNEK RIVER DRAINAGE PERMIT AND HARVEST AVERAGES BY RESIDENCY

The previous section discussed general subsistence harvest patterns in the Naknek River drainage; the focus of this section changes to subsistence harvest patterns based on residency. The number of permits issued to residents of the Bristol Bay Borough (Naknek, South Naknek, and King Salmon) in the Naknek River drainage has decreased over time, while the number of permits issued to other Alaska residents has remained stable (Table 2-5). The historical (1997–2023) average of 196 permits issued to local Bristol Bay Borough residents declined to 159 permits for the 10-year period spanning 2014–2023 and further declined to 132 permits for the recent 5-year (2019–2023) average. In contrast, the number of permits issued to other Alaska residents was lower, totaling between 81 and 86 for the three time periods (historical, and 10- and

5-year averages). In 2024, more permits were issued in each Bristol Bay Borough community than had been issued in the previous year, but all were similar to the recent five-year (2019–2023) averages; fewer permits for nonlocal residents were issued in 2024 (93 permits) compared to 2023 (103), but more than the five-year average of 83 permits.

In contrast, the estimated number of salmon harvested per permit has remained stable over time, both among local Bristol Bay Borough residents and other Alaska residents (Table 2-6). Residents of the Bristol Bay Borough harvest more salmon per permit than do residents of other Alaska communities who fish in the area. At the community level, residents of South Naknek have seen the largest change in the number of salmon harvested per permit. Annual harvests per permit were relatively stable, as evidenced by the average harvest of 76 fish per permit and 74 fish during the historical (1997–2023) and recent 10-year (2014–2023) time periods. A substantial decrease is noted beginning in 2020 and continued through 2024. The most recent five-year average was 43 fish harvested per permit; the 2023 and 2024 harvests were much lower than that average, with an average of only 15 fish per permit.

Table 2-4.-Number of permits issued and estimated subsistence salmon harvests, by community based on permit holder place of residence, in numbers of fish, Naknek River drainage, Bristol Bay Area, Alaska, 1997–2024.

Year	Permits issued	Estimated salmon harvest					Total	Salmon per permit
		King Salmon	Naknek	South Naknek	Subtotal, local residents	Other Alaska residents		
1997	338	7,368	17,155	298	24,820	6,882	31,702	94
1998	362	6,568	15,682	2,623	24,873	9,198	34,072	94
1999	312	7,059	13,447	2,627	23,133	6,415	29,549	95
2000	350	7,418	11,500	3,311	22,229	5,451	27,680	79
2001	299	6,970	11,540	3,614	22,124	4,339	26,463	89
2002	290	4,628	10,623	3,451	18,702	3,127	21,830	75
2003	316	5,924	10,155	3,607	19,686	5,443	25,128	80
2004	277	4,731	10,227	2,806	17,764	2,617	20,381	74
2005	268	6,258	10,285	2,216	18,759	4,153	22,912	85
2006	289	5,528	10,211	2,467	18,206	3,690	21,895	76
2007	287	5,614	11,156	2,676	19,446	5,296	24,742	86
2008	271	5,599	10,260	2,602	18,462	4,995	23,456	87
2009	279	6,093	10,422	1,215	17,730	4,638	22,368	80
2010	261	6,519	11,450	1,048	19,016	4,233	23,250	89
2011	272	5,697	11,175	1,154	18,026	5,367	23,392	86
2012	280	5,667	10,667	942	17,276	4,552	21,828	78
2013	269	4,821	8,759	1,281	14,860	5,787	20,647	77
2014	270	6,202	11,894	1,695	19,791	6,348	26,139	97
2015	286	7,536	12,457	3,143	23,137	8,926	32,062	112
2016	259	4,017	10,076	1,259	15,352	8,732	24,084	93
2017	283	5,488	10,821	1,554	17,863	7,451	25,314	89
2018	273	6,765	10,254	1,280	18,299	7,089	25,387	93
2019	270	5,815	7,628	1,506	14,949	8,050	22,999	85
2020	229	5,127	8,734	296	14,158	5,270	19,428	85
2021 ^a	185	4,291	6,524	293	11,107	5,095	16,203	88
2022 ^a	183	5,112	7,501	295	12,908	4,448	17,356	95
2023	209	3,428	7,158	74	10,660	7,262	17,922	86
2024 ^b	224	4,723	7,562	183	12,468	5,876	18,344	82

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Table 2-4.-Page 2 of 2.

Year	Permits issued	Estimated salmon harvest					Salmon per permit	
		King Salmon	Naknek	South Naknek	Subtotal, local residents	Other Alaska residents		Total
5-year average (2019–2023)	215	4,755	7,509	493	12,757	6,025	18,782	87
10-year average (2014–2023)	245	5,378	9,305	1,140	15,822	6,867	22,689	93
Historical average (1997–2023)	277	5,787	10,658	1,827	18,272	5,735	24,007	87

Source ADF&G Division of Subsistence, ASFDB 2025 (ADF&G 2025).

Note Harvests are extrapolated for all permits issued, based on those returned. This table reports harvest estimates as they have appeared in Annual Management Reports. Estimates for 1997 to the present are based on community of residence and include fish caught only in the Naknek River drainage.

a. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

b. Data are preliminary.

Table 2-5.—Number of subsistence salmon permits issued, by place of residence for permit holders, Naknek River drainage, Bristol Bay Area, 1997–2024.

Year	Number of permits issued					Total
	King Salmon	Naknek	South Naknek	Subtotal, local residents	Other Alaska residents	
1997	105	133	6	244	94	338
1998	99	115	34	248	114	362
1999	96	102	38	236	76	312
2000	109	102	42	253	97	350
2001	90	104	37	231	68	299
2002	80	100	39	219	71	290
2003	90	109	39	238	78	316
2004	83	101	34	218	59	277
2005	81	99	31	211	57	268
2006	75	104	33	212	77	289
2007	92	90	26	208	79	287
2008	75	97	26	198	73	271
2009	72	99	27	198	81	279
2010	77	98	21	196	65	261
2011	71	97	22	190	82	272
2012	80	104	18	202	78	280
2013	75	91	19	185	84	269
2014	74	95	22	191	79	270
2015	84	92	22	198	88	286
2016	72	82	18	172	87	259
2017	74	100	17	191	92	283
2018	74	87	18	179	94	273
2019	66	76	19	161	109	270
2020	68	77	8	153	76	229
2021 ^a	49	49	12	110	75	185
2022 ^a	61	57	13	131	52	183
2023	43	58	5	106	103	209
2024 ^b	56	63	12	131	93	224
5-year average (2019–2023)	57	63	11	132	83	215
10-year average (2014–2023)	67	77	15	159	86	245
Historical average (1997–2023)	78	93	24	196	81	277

Source ADF&G Division of Subsistence, ASFDB 2025 (ADF&G 2025).

a. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

b. Data are preliminary.

Table 2-6.–Per permit harvest of salmon, by community based on permit holder place of residence, in numbers of fish, Naknek River drainage, Bristol Bay Area, Alaska, 1997–2024.

Year	Salmon harvest per permit					Total
	King Salmon	Naknek	South Naknek	Subtotal, local residents	Other Alaska residents	
1997	70	129	50	102	73	94
1998	66	136	77	100	81	94
1999	74	132	69	98	84	95
2000	68	113	79	88	56	79
2001	77	111	98	96	64	89
2002	58	106	88	85	44	75
2003	66	93	92	83	70	80
2004	57	101	83	81	44	74
2005	77	104	71	89	73	85
2006	74	98	75	86	48	76
2007	61	124	103	93	67	86
2008	75	106	100	93	68	87
2009	85	105	45	90	57	80
2010	85	117	50	97	65	89
2011	80	115	52	95	65	86
2012	71	103	52	86	58	78
2013	64	96	67	80	69	77
2014	84	125	77	104	80	97
2015	90	135	143	117	101	112
2016	56	123	70	89	100	93
2017	74	108	91	94	81	89
2018	91	118	71	102	75	93
2019	88	100	79	93	74	85
2020	75	113	37	93	69	85
2021 ^a	88	133	24	101	68	88
2022 ^a	84	132	23	99	86	95
2023	80	123	15	101	71	86
2024 ^b	84	120	15	95	63	82

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Table 2-6.–Page 2 of 2.

Year	Salmon harvest per permit					Total
	King Salmon	Naknek	South Naknek	Subtotal, local residents	Other Alaska residents	
5-year average (2019–2023)	83	118	43	96	73	87
10-year average (2014–2023)	81	120	74	99	80	93
Historical average (1997–2023)	74	114	76	93	71	87

Source ADF&G Division of Subsistence, ASFDB 2025 (ADF&G 2025).

a. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

b. Data are preliminary.

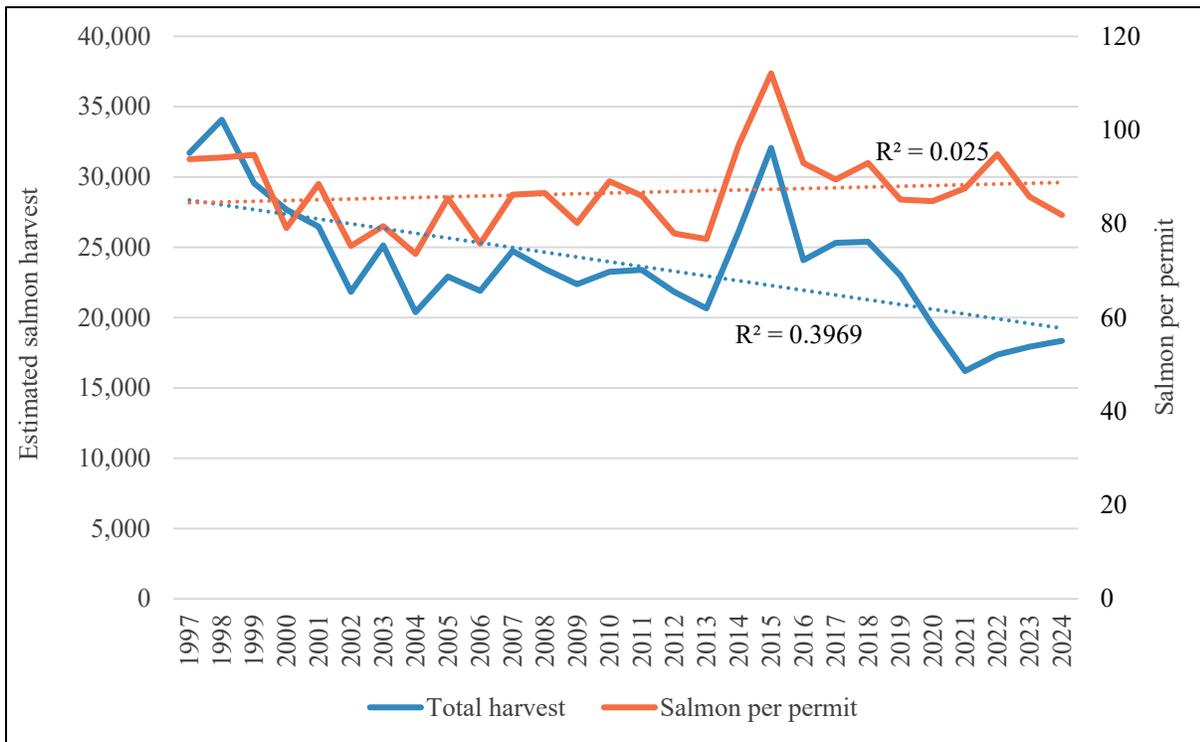


Figure 2-4.—Estimated subsistence salmon harvests and per permit harvest of salmon, in numbers of fish, Naknek River drainage, Bristol Bay Area, Alaska, 1997–2024.

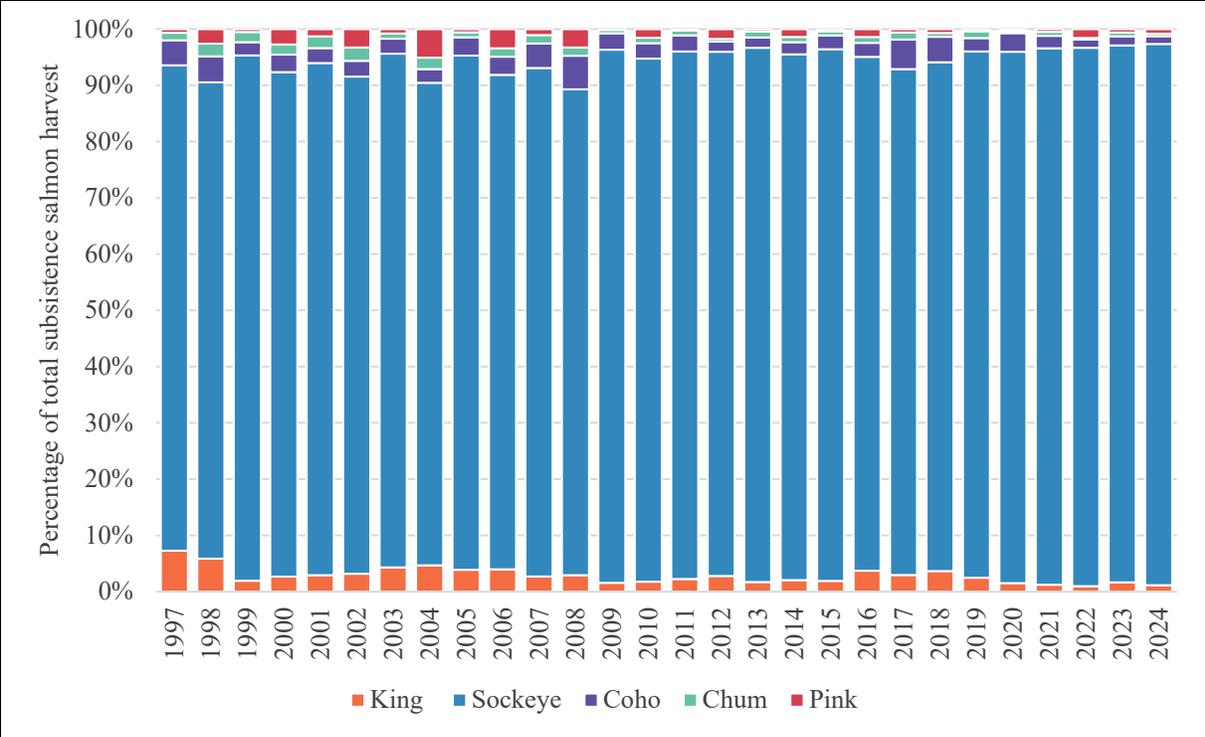


Figure 2-5.—Composition of estimated subsistence salmon harvest, by species, Naknek River drainage, Bristol Bay Area, Alaska, 1997–2024.

3. NUSHAGAK SUBSISTENCE SALMON FISHERY

COMMUNITIES AND POPULATION

The communities in the Nushagak District and their 2024 estimated populations include Aleknagik (209), Clarks Point (which also includes Ekuk) (57), Dillingham (2,031), Ekwok (116), Koliganek (169), Manokotak (490), and New Stuyahok (449) (Table 1-1). The most recent household subsistence surveys in Nushagak communities collected salmon harvest and use data for the following communities and years: Manokotak for 2023; Dillingham for 2021 (Jones et al. 2024); Clarks Point, Ekwok, New Stuyahok, and Koliganek for 2013 and 2014 (Halas and Cunningham 2019); and Aleknagik for 2008 (Holen et al. 2012b). Except for results for Manokotak, which are being compiled for a forthcoming technical report, these data may be found in their respective technical reports as well as in the online CSIS.

GENERAL PATTERNS OF SUBSISTENCE HARVESTS

Salmon harvests in the Nushagak District have remained relatively stable since the late 1980s (Figure 3-1). Based on permit returns, 47,293 salmon were harvested in 2024, which is more fish than have been harvested on average during the recent five-year period of 2019–2023 (42,152 fish) (Table 3-1). The 2024 harvest is on par with the most recent 10-year (2014–2023) average of 47,245 salmon but lower than the historical average of 50,759 fish. As Figure 3-2 shows, the salmon harvest in the Nushagak District varies across species, with sockeye salmon usually composing most of the harvest. The proportion of the harvest comprising sockeye salmon has been growing since 2014, and in 2024 accounted for more than 80% of the total salmon harvest (see also Appendix Table C-2). In comparison, harvests of coho salmon have composed a relatively stable portion of total harvests (11% on average for 1985–2023), while king salmon have composed a smaller proportion since around 2017. The number of king salmon harvested in the Nushagak District in 2024 (3,991) was among the lowest amount on record, and significantly lower than the 5-year (2019–2023), 10-year (2014–2023), and historical averages (1985–2023) of 6,463, 10,031, and 11,869 king salmon, respectively (Table 3-1).

Table 3-2 presents the number of permits issued and the estimated subsistence salmon harvest, in numbers of fish, by each Nushagak District community based on permit holder place of residence, from 1985–2021, limited to fish harvested from the Nushagak District. The number of permits issued has been generally increasing over time (Figure 3-3). In 2024, the department issued 587 permits, more than it issued on average historically (1985–2023; 516 permits) or recently (550 permits from 2014–2023 and 506 permits for the time period spanning 2019–2023) (Table 3-2). In contrast to the number of issued permits, the average harvest of salmon per permit issued has been declining in the Nushagak District (Figure 3-3). From 1985 through 1994, more than 100 salmon were harvested per permit on average each year. From 1995 through 2011, an average of 89 salmon were harvested per permit (Table 3-2). The average salmon harvests per subsistence permit reached a low of 73 fish per permit in 2012 (Figure 3-3; Table 3-2). Since 2013, harvests per permit have fluctuated but mostly stayed within 80–90 fish per permit. In 2024, 81 fish per permit were harvested, which is comparable to the recent 5-year (2019–2023) average of 83 fish per permit, and slightly lower than the recent 10-year (2014–2023) average of 86 fish per permit.

Sockeye salmon runs have consistently met escapement goals in the Nushagak River since 2004 (Elison et al. 2025). While sockeye salmon harvests compose the majority of the Nushagak District subsistence salmon fishery, as mentioned above, king salmon returns and subsistence harvests are larger in the Nushagak River than in other Bristol Bay watersheds. Through the Chinook Salmon Research Initiative (CSRI), the division documented local and traditional knowledge of the subsistence salmon fishery, with a focus on king salmon, in Dillingham, Clarks Point, Ekwok, New Stuyahok, and Koliganek (Halas and Cunningham 2019). This multi-year study also included three years of subsistence household harvest survey data collection for these communities.

Although recent king salmon returns and harvests have been lower compared to previous years, the Nushagak District continues to provide for higher king salmon subsistence harvests than all other Bristol Bay districts combined (Appendix Table C-2). In 2024, 4,596 king salmon were harvested for subsistence in the entire BBA, with 3,991 harvested in the Nushagak District (Appendix Table C-6).

Nushagak Bay Noncommercial Area Harvest

The Nushagak District subsistence salmon harvest regulations require that permit holders record the date when, and areas where, all salmon are harvested. The department categorizes these locations into the following general subsistence use locations for reporting purposes: Igushik/Snake River, Nushagak Bay Commercial, Nushagak Bay Noncommercial, Nushagak River, Wood River, and “site unknown” (see map depicting the Dillingham area in Appendix B). Each subsistence permit should also have more specific harvest location information identified by the permit holder. For example, within the Nushagak Bay Noncommercial category are the local areas known as the “Dillingham beaches,” which include Snag Point, and the Scandinavian, Kanakanak, and “City Dock” areas. Also included are both sides of the lower Wood River seaward of Red Bluff (59° 9.58" N. lat. 158° 32.36" W. long), and the Nushagak River to Lewis Point (58° 59.46' N. lat. 158° 05.57' W. long).

The Nushagak Bay Noncommercial area produced the largest proportion of the subsistence salmon harvest within the district (an estimated 23,181 salmon for 2024) and had the highest portion of issued permits (52%) (Appendix Table C-6). Table 3-3 shows the number of permits issued and the estimated subsistence salmon harvest, in numbers of fish, based on permit holder place of residency in either a Bristol Bay Area community or somewhere else in Alaska, from 1997–2024, limited to fish harvested from the Nushagak Bay Noncommercial area. The majority of the subsistence harvest comprised sockeye and king salmon, though sockeye salmon have been composing increasingly larger percentages of the harvest since approximately 2014 (Figure 3-4). Concurrently, king salmon composed a smaller percentage of the harvest each year. BBA residents harvest the vast majority of salmon from the Nushagak District, but other Alaska residents have been harvesting an increasing proportion of the overall harvest (Table 3-3). Since 1997, harvests by Alaska residents residing outside the BBA accounted for 11% of the Nushagak Bay Noncommercial area subsistence salmon harvest. During the recent previous 10 years (2014–2023), this percentage increased to 15% and further increased to 17% of the harvest during the most recent five years (2019–2023). While the magnitude of the percentage difference changes, the same pattern is seen in harvests of specific species of salmon as well (Table 3-4).

In 2024, the department issued 186 permits to residents from within the BBA intending to fish in the Nushagak Bay Noncommercial area (Table 3-3). This was slightly more than the 184 permits issued on average over the recent 5-year (2019–2023) time period, but fewer permits than those issued on average over the past 10 years (2014–2023) (193 permits), or historically (233 permits). Conversely, for Alaska residents living outside the BBA who fish in the Nushagak Bay Noncommercial area for subsistence, permits issued have increased from 40 for the historical average to 58 for the 10-year average, and 68 for the recent 5-year average. In 2024, the department issued a total of 121 permits to these other Alaska residents. BBA residents harvest more salmon per permit than do other Alaska residents, and, from 1997 until 2020, the average harvest per permit had remained relatively stable (Figure 3-5). Harvests per permit from 2020 through 2024 show greater variability than in previous years. The recent 5-year (2019–2023) average harvest per permit for BBA residents was 79 salmon and the recent 10-year (2014–2023) average was 81 fish. This compares to a historical average of 77 fish per permit. Likewise, the harvest per permit of Alaskans residing outside of the BBA has also been stable over time, with a 5-year average of 52 fish per permit and a 10-year average of 52 fish.

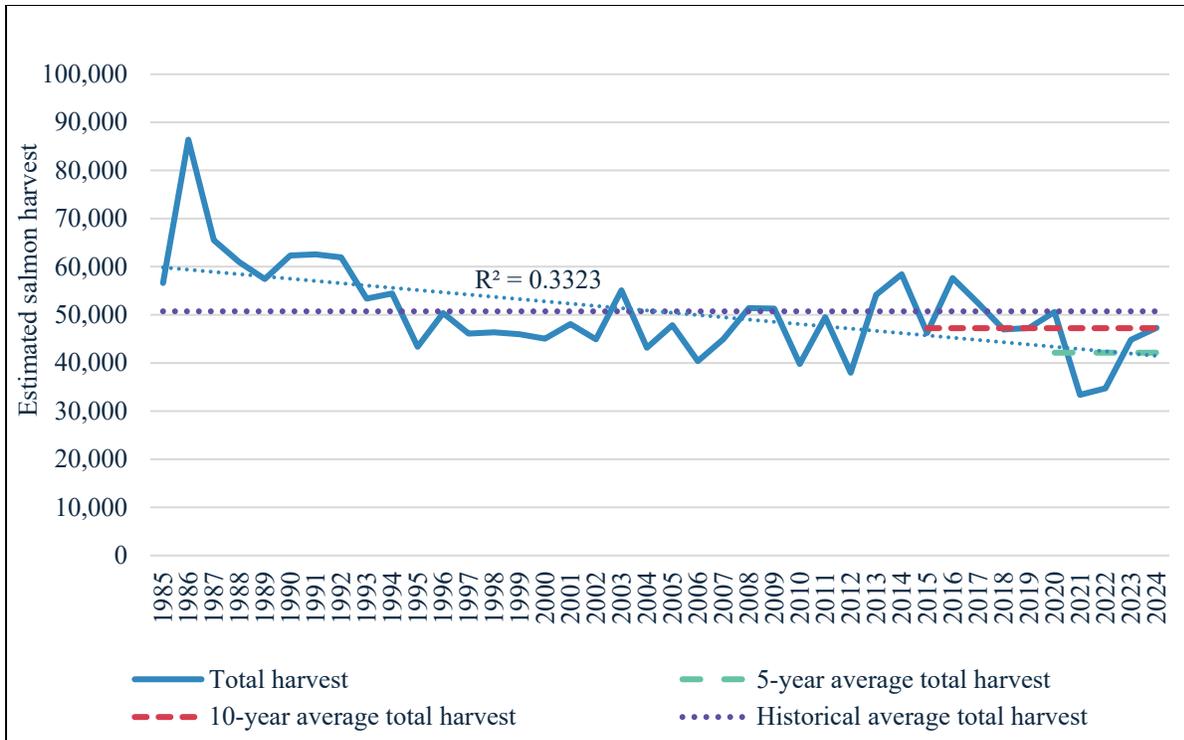


Figure 3-1.—Estimated subsistence salmon harvests, in numbers of fish, Nushagak District, Bristol Bay Area, Alaska, 1985–2024.

Table 3-1.—Estimated subsistence salmon harvests, by species, in numbers of fish, Nushagak District, Bristol Bay Area, Alaska, 1985–2021.

Year	Estimated salmon harvest					Total
	King	Sockeye	Coho	Chum	Pink	
1985	7,900	38,000	6,100	4,000	600	56,600
1986	12,600	49,000	9,400	10,000	5,400	86,400
1987	12,200	40,900	6,200	6,000	200	65,500
1988	10,079	31,086	5,223	8,234	6,316	60,938
1989	8,122	34,535	8,679	5,704	407	57,447
1990	12,407	33,003	5,919	7,808	3,183	62,320
1991	13,627	33,161	10,784	4,688	292	62,552
1992	13,588	30,640	7,103	7,076	3,519	61,926
1993	17,709	27,114	5,038	3,257	240	53,358
1994	15,490	26,501	5,338	5,055	2,042	54,426
1995	13,701	22,793	3,905	2,786	188	43,373
1996	15,941	22,935	5,217	4,704	1,573	50,370
1997	15,318	25,080	3,433	2,056	218	46,106
1998	12,258	25,217	5,316	2,487	1,076	46,355
1999	10,057	29,387	3,993	2,409	124	45,969
2000	9,470	24,451	5,983	3,463	1,662	45,029
2001	11,760	26,939	5,993	3,011	378	48,080
2002	11,281	22,777	4,565	5,096	1,179	44,897
2003	18,686	25,491	5,432	5,064	403	55,076
2004	15,610	17,491	4,240	3,869	1,944	43,154
2005	12,529	23,916	5,596	5,006	793	47,841
2006	9,971	20,773	3,590	4,448	1,591	40,373
2007	13,330	25,127	3,050	3,006	430	44,944
2008	12,960	26,828	5,133	4,552	1,923	51,395
2009	12,737	26,922	6,777	4,510	355	51,300
2010	9,150	22,326	2,983	3,660	1,672	39,791
2011	12,461	28,006	5,746	3,055	230	49,497
2012	10,350	20,587	2,642	3,072	1,309	37,960
2013	11,602	30,283	7,717	4,368	206	54,176
2014	16,049	27,073	7,463	5,731	2,110	58,425
2015	12,117	25,240	5,644	2,953	295	46,248
2016	16,502	27,369	4,766	4,592	4,394	57,624
2017	11,122	31,310	5,720	4,026	257	52,434
2018	12,206	25,547	4,735	3,635	840	46,963
2019	10,206	28,563	5,229	2,996	267	47,262
2020	8,350	35,379	4,320	2,040	508	50,597
2021 ^a	3,946	25,084	3,184	821	342	33,377
2022 ^a	6,446	24,985	1,558	1,099	635	34,723
2023	3,366	35,690	4,547	1,053	145	44,801
2024 ^b	3,991	38,527	2,577	1,354	844	47,293

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Table 3-1.—Page 2 of 2.

Year	Estimated salmon harvest					Total
	King	Sockeye	Coho	Chum	Pink	
5-year average (2019–2023)	6,463	29,940	3,768	1,602	379	42,152
10-year average (2014–2023)	10,031	28,624	4,717	2,895	979	47,245
Historical average (1985–2023)	11,877	28,141	5,340	4,138	1,263	50,759

Source ADF&G Division of Subsistence, ASFDB 2024 (ADF&G 2024).

Note Harvest estimates from before 1988 are rounded to the nearest hundred fish.

a. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

b. Data are preliminary.

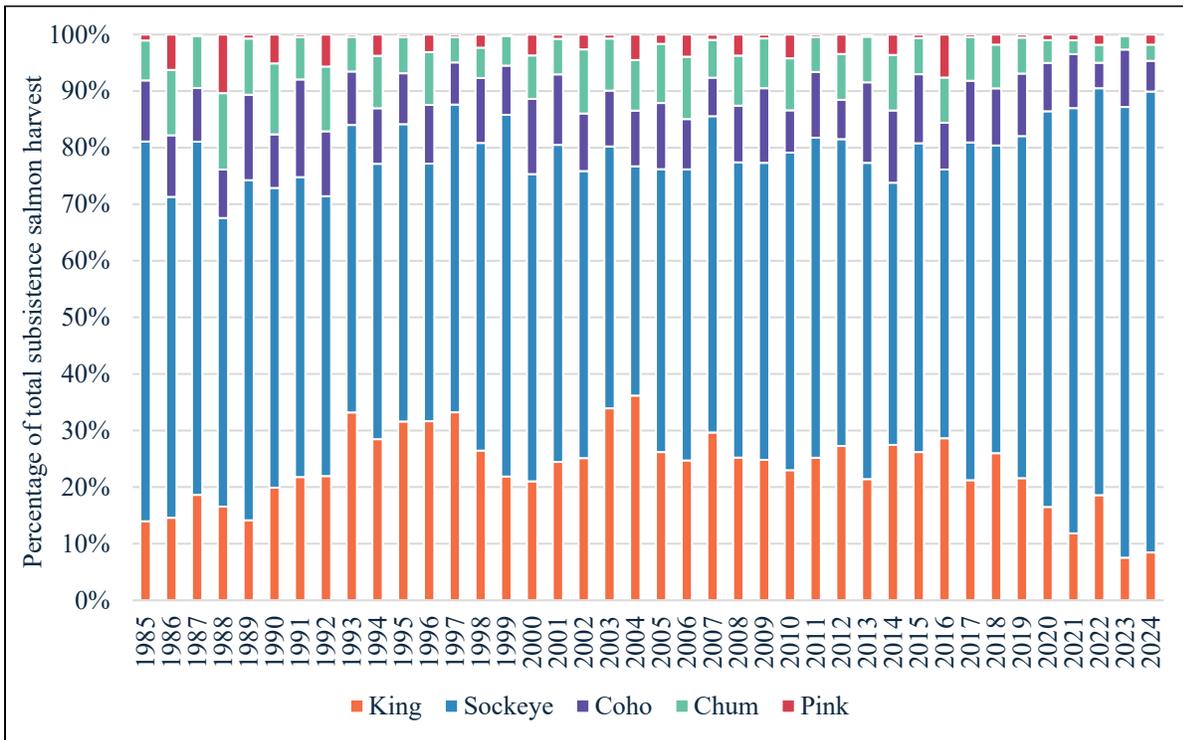


Figure 3-2.—Composition of estimated subsistence salmon harvests, by species, Nushagak District, Bristol Bay Area, Alaska, 1985–2024.

Table 3-2.—Number of permits issued and estimated subsistence salmon harvests, by community based on permit holder place of residence, in numbers of fish, Nushagak District, Bristol Bay Area, Alaska, 1985–2021.

Year	Permits issued	Estimated salmon harvest							Subtotal, Nushagak area communities	Other Alaska residents ^{b,c}	Total	Salmon per permit
		Dillingham ^a	Manokotak	Aleknagik	Ekwok	New Stuyahok	Koliganek					
1985	406	22,900	3,600	1,600	7,000	14,500	6,800	56,400		56,400	139	
1986	424	31,900	5,500	6,900	7,800	26,400	8,200	86,700		86,700	204	
1987	474	33,500	5,900	3,100	6,400	11,400	4,900	65,200		65,200	138	
1988	441	29,600	5,500	2,400	6,100	11,700	5,700	61,000		61,000	138	
1989	432	31,800	5,800	2,000	4,700	9,700	3,800	57,800		57,800	134	
1990	441	28,860	6,600	2,300	4,900	9,900	8,000	60,560	700	61,260	139	
1991	528	34,399	5,873	3,043	4,532	8,326	5,438	61,611	2,163	63,774	121	
1992	476	31,702	4,317	2,184	5,971	11,325	3,708	59,207	2,635	61,842	130	
1993	500	25,315	3,048	2,593	2,936	12,169	4,180	50,241	2,538	52,779	106	
1994	523	30,145	3,491	2,289	4,343	8,056	4,513	52,837	2,322	55,159	105	
1995	484	24,998	2,453	1,468	2,046	6,911	2,983	40,859	2,406	43,265	89	
1996	481	27,161	3,883	1,733	2,866	8,892	3,319	47,854	2,113	49,967	104	
1997	538	23,255	3,988	1,989	1,797	6,427	4,179	41,635	4,598	46,233	86	
1998	562	24,072	4,069	1,112	3,555	5,419	3,166	41,393	4,958	46,351	82	
1999	548	26,502	3,413	1,532	1,805	4,556	2,772	40,580	5,389	45,969	84	
2000	541	27,931	3,173	1,111	3,946	3,715	2,792	42,668	2,362	45,029	83	
2001	554	26,435	3,700	2,129	2,218	7,294	2,209	43,985	4,096	48,080	87	
2002	520	25,004	3,254	1,517	2,735	6,043	3,098	41,651	3,247	44,897	86	
2003	527	26,955	4,214	2,044	2,291	10,817	5,721	52,042	3,034	55,076	105	
2004	511	23,308	2,052	2,206	1,891	6,714	3,619	39,790	3,364	43,154	84	
2005	502	21,898	1,576	1,795	1,388	9,673	8,422	44,752	3,088	47,841	95	

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Table 3-2.–Page 2 of 3.

Year	Permits issued	Estimated salmon harvest								Total	Salmon per permit
		Dillingham ^a	Manokotak	Aleknagik	Ekwok	New Stuyahok	Koliganek	Subtotal, Nushagak area communities	Other Alaska residents ^{b,c}		
2006	461	22,081	1,654	2,047	1,499	6,160	3,885	37,326	3,047	40,373	88
2007	496	25,190	2,443	1,382	1,267	8,284	3,054	41,620	3,324	44,944	91
2008	571	27,388	5,429	3,309	1,902	5,690	4,423	48,141	3,255	51,395	90
2009	530	30,117	2,068	2,646	2,345	6,855	3,700	47,731	3,568	51,300	97
2010	528	22,842	2,665	1,570	1,380	5,608	2,406	36,471	3,320	39,791	75
2011	525	26,850	1,433	3,016	1,805	7,980	3,539	44,623	4,875	49,498	94
2012	517	22,037	1,212	2,457	1,253	5,062	2,834	34,855	3,106	37,961	73
2013	590	26,348	1,378	2,373	2,300	11,890	6,854	51,143	3,274	54,417	93
2014	581	31,838	1,658	3,560	2,700	7,613	4,654	52,023	6,403	58,426	101
2015	591	26,049	2,946	2,186	1,618	5,860	2,085	40,744	5,504	46,248	78
2016	643	37,233	2,486	2,346	1,418	5,716	2,510	51,711	5,913	57,624	90
2017	563	30,411	2,320	2,767	1,622	5,785	2,286	45,192	7,243	52,434	93
2018	589	25,867	722	2,351	965	5,213	2,807	37,926	9,037	46,963	80
2019	616	26,944	1,667	1,257	570	3,889	2,752	37,078	10,184	47,262	77
2020	585	29,696	920	2,076	1,251	4,517	2,723	41,184	9,413	50,597	86
2021 ^d	373	14,316	1,138	1,208	1,777	6,180	4,051	28,669	4,707	33,377	89
2022 ^d	410	18,876	944	1,225	957	2,749	3,143	27,893	6,830	34,723	85
2023	544	26,332	1,321	1,537	1,177	2,788	2,890	36,045	8,756	44,801	82
2024 ^e	587	24,493	1,442	1,516	1,440	3,200	2,209	34,301	12,992	47,293	81

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Table 3-2.–Page 3 of 3.

Year	Permits issued	Estimated salmon harvest								Total	Salmon per permit
		Dillingham ^a	Manokotak	Aleknagik	Ekwok	New Stuyahok	Koliganek	Subtotal, Nushagak area communities	Other Alaska residents ^{b,c}		
5-year average (2019–2023)	506	23,233	1,198	1,460	1,146	4,024	3,112	34,174	7,978	42,152	83
10-year average (2014–2023)	550	26,756	1,612	2,051	1,406	5,031	2,990	39,846	7,399	47,245	86
Historical average (1985–2023)	516	26,873	3,072	2,214	2,796	7,892	4,054	46,901	4,434	50,767	98

Source ADF&G Division of Subsistence, ASFDB 2024 (ADF&G 2024).

Note Harvests are extrapolated for all permits issued, based on those returned. Harvest estimates from before 1991 are rounded to the nearest hundred fish. This table reports harvest estimates as they have appeared in Annual Management Reports. Harvest estimates prior to 1990 are based on the community where the permit was issued; estimates for 1990 to the present are based on community of residence and include fish caught only in the Nushagak District.

a. Includes permits issued for Clarks Point, Portage Creek, and Ekok.

b. Blank cells indicate no permits issued. Only residents of the Nushagak watershed could obtain subsistence permits prior to 1990.

c. Subsistence harvests by non-Nushagak watershed residents.

d. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

e. Data are preliminary.

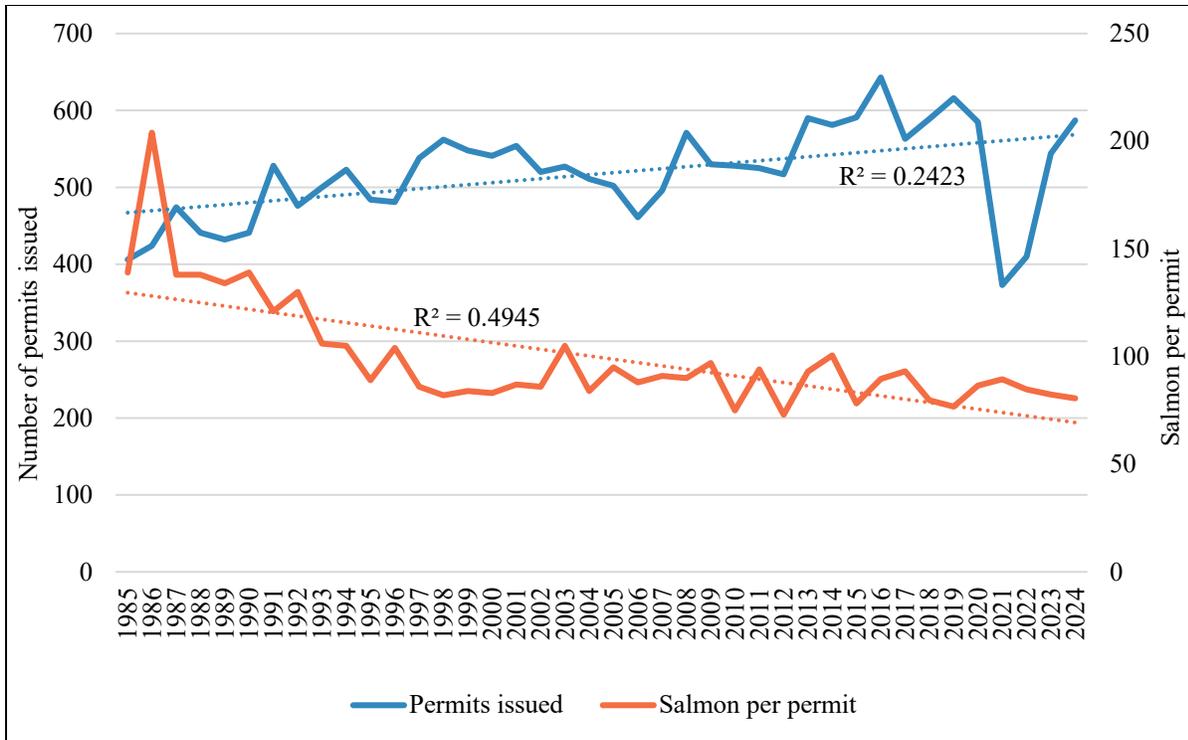


Figure 3-3.—Number of subsistence salmon permits issued and subsistence salmon harvest per permit, Nushagak District, Bristol Bay Area, Alaska, 1985–2021.

Table 3-3.--Number of permits issued and estimated subsistence salmon harvests, by residency type, Nushagak Bay Noncommercial area, Bristol Bay Area, Alaska, 1997–2024.

Year	Bristol Bay Area residents			Other Alaska residents			All Alaska residents		
	Permits issued	Estimated salmon harvest	Salmon per permit	Permits issued	Estimated salmon harvest	Salmon per permit	Permits issued	Estimated salmon harvest	Salmon per permit
1997	200	16,380	82	29	1,558	54	229	17,938	78
1998	225	16,377	73	19	608	32	244	16,985	70
1999	228	18,142	80	33	1,567	47	261	19,709	76
2000	223	18,101	81	22	663	30	245	18,764	77
2001	212	16,308	77	25	1,067	43	237	17,375	73
2002	217	16,125	74	22	692	31	239	16,817	70
2003	276	21,926	79	26	1,234	47	302	23,160	77
2004	282	20,993	74	31	1,168	38	313	22,161	71
2005	257	18,114	70	23	1,077	47	280	19,191	69
2006	242	18,160	75	21	1,177	56	263	19,337	74
2007	287	21,539	75	30	2,194	73	317	23,733	75
2008	291	21,106	73	36	1,988	55	327	23,094	71
2009	305	25,858	85	36	1,852	51	341	27,710	81
2010	261	17,644	68	45	1,535	34	306	19,179	63
2011	294	23,362	79	41	1,711	42	335	25,073	75
2012	266	17,125	64	37	1,370	37	303	18,495	61
2013	284	19,488	69	39	1,748	45	323	21,236	66
2014	256	20,262	79	47	2,645	56	303	22,907	76
2015	204	14,620	72	34	1,960	58	238	16,580	70
2016	200	15,249	76	49	1,984	40	249	17,232	69
2017	183	17,948	98	43	2,447	57	226	20,396	90
2018	170	14,319	84	61	3,285	54	231	17,604	76
2019	252	16,280	65	92	4,120	45	344	20,400	59
2020	262	22,169	85	102	2,905	28	364	25,073	69
2021 ^a	95	6,634	70	25	1,267	51	120	7,901	66
2022 ^a	121	10,024	83	24	2,023	84	145	12,048	83
2023	189	17,937	95	98	5,055	52	287	22,991	80
2024 ^b	186	14,540	78	121	8,641	71	307	23,181	76

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Table 3-3.–Page 2 of 2.

	Bristol Bay Area residents			Other Alaska residents			All Alaska residents		
	Permits issued	Estimated salmon harvest	Salmon per permit	Permits issued	Estimated salmon harvest	Salmon per permit	Permits issued	Estimated salmon harvest	Salmon per permit
5-year average (2019–2023)	184	14,609	79	68	3,074	52	252	17,683	71
10-year average (2014–2023)	193	15,544	81	58	2,769	52	251	18,313	74
Historical average (1997–2023)	233	17,859	77	40	1,885	48	273	19,744	73

Source ADF&G Division of Subsistence, ASFDB 2024 (ADF&G 2024).

a. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

b. Data are preliminary.

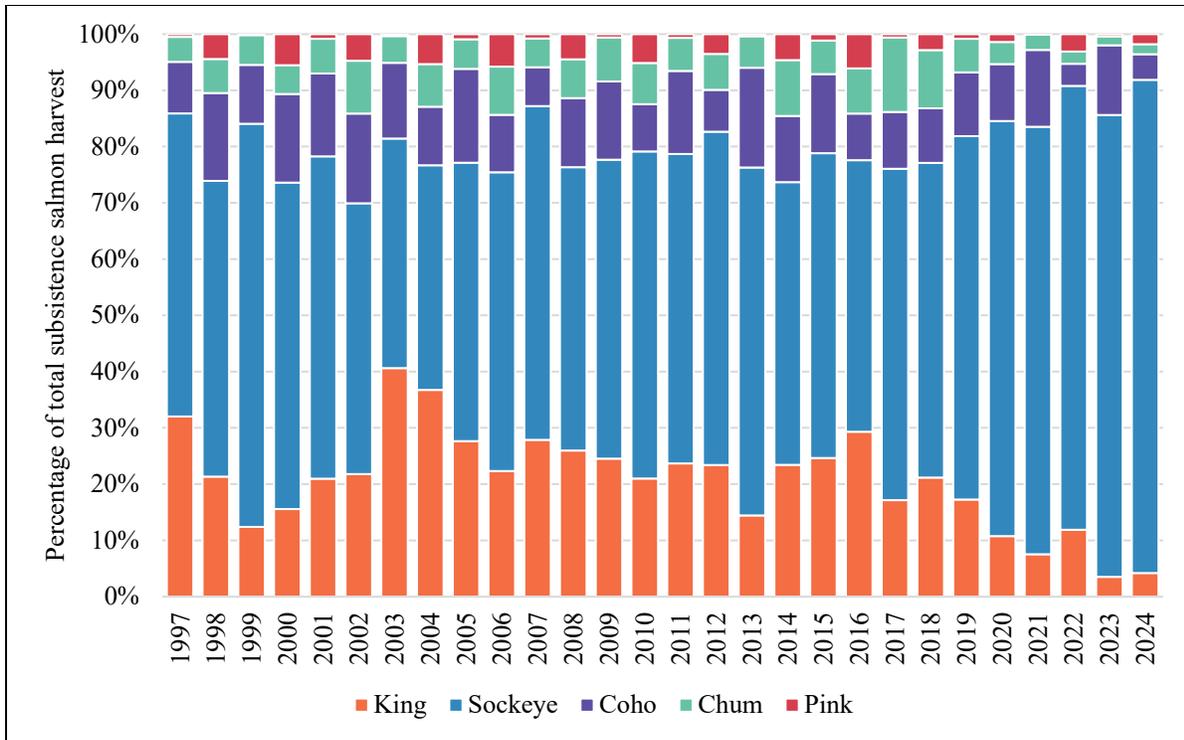


Figure 3-4.—Composition of estimated subsistence salmon harvests, by species, Nushagak Bay Noncommercial area, Bristol Bay Area, Alaska, 1997–2024.

Table 3-4.—Estimated subsistence salmon harvests, by residency type based on permit holder place of residence, in numbers of fish, Nushagak Bay Noncommercial area, Bristol Bay Area, Alaska, 1997–2024.

Year	King			Sockeye			Coho		
	Bristol Bay residents	Other Alaska residents	Total	Bristol Bay residents	Other Alaska residents	Total	Bristol Bay residents	Other Alaska residents	Total
1997	5,420	325	5,745	8,549	1,115	9,664	1,591	50	1,641
1998	3,476	146	3,622	8,535	395	8,930	2,631	20	2,651
1999	2,267	174	2,441	12,929	1,197	14,126	1,905	158	2,062
2000	2,782	139	2,921	10,465	425	10,889	2,926	28	2,954
2001	3,492	148	3,641	9,250	710	9,960	2,442	114	2,556
2002	3,567	96	3,663	7,718	377	8,095	2,603	78	2,681
2003	9,282	127	9,409	8,481	968	9,449	3,042	73	3,115
2004	7,892	250	8,142	8,012	840	8,852	2,285	21	2,305
2005	5,124	179	5,303	8,885	616	9,501	2,973	227	3,200
2006	4,184	132	4,316	9,499	770	10,269	1,795	181	1,976
2007	6,003	612	6,615	12,663	1,418	14,081	1,581	53	1,634
2008	5,558	442	6,000	10,328	1,302	11,630	2,729	107	2,836
2009	6,592	204	6,795	13,442	1,283	14,725	3,624	233	3,857
2010	3,873	151	4,024	9,873	1,283	11,156	1,588	22	1,610
2011	5,612	321	5,933	12,685	1,108	13,793	3,530	172	3,702
2012	4,108	217	4,325	10,082	878	10,961	1,230	143	1,374
2013	2,972	93	3,065	11,708	1,423	13,131	3,602	166	3,767
2014	5,018	344	5,363	9,571	1,940	11,512	2,586	114	2,701
2015	3,909	186	4,095	7,363	1,649	9,012	2,239	100	2,339
2016	4,538	497	5,035	7,133	1,163	8,296	1,378	47	1,425
2017	3,221	277	3,498	10,212	1,803	12,015	1,837	221	2,057
2018	3,375	349	3,725	7,290	2,559	9,850	1,479	228	1,707
2019	3,327	199	3,525	9,501	3,698	13,199	2,249	63	2,313
2020	2,614	83	2,696	15,808	2,695	18,503	2,467	69	2,536
2021 ^a	540	54	594	4,924	1,080	6,004	972	108	1,080
2022 ^a	1,225	208	1,433	7,885	1,620	9,505	318	155	473
2023	746	59	805	14,040	4,838	18,878	2,757	89	2,846
2024 ^b	830	141	971	11,932	8,392	20,324	1,036	22	1,058
5-year average (2019–2023)	1,690	120	1,811	10,432	2,786	13,218	1,753	97	1,849
10-year average (2014–2023)	2,851	226	3,077	9,373	2,305	11,677	1,828	119	1,948
Historical average (1997–2023)	4,101	223	4,323	9,883	1,450	11,333	2,235	113	2,348

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Table 3-4.–Page 2 of 2.

Year	Chum			Pink			Total		
	Bristol Bay residents	Other Alaska residents	Total	Bristol Bay residents	Other Alaska residents	Total	Bristol Bay residents	Other Alaska residents	Total
1997	727	68	795	92	0	92	16,380	1,558	17,938
1998	989	39	1,028	746	8	754	16,377	608	16,985
1999	1,005	38	1,043	36	0	36	18,142	1,567	19,709
2000	892	68	960	1,035	5	1,040	18,101	663	18,764
2001	997	76	1,073	127	19	146	16,308	1,067	17,375
2002	1,490	89	1,579	747	52	799	16,125	692	16,817
2003	1,046	55	1,101	75	10	85	21,926	1,234	23,160
2004	1,627	50	1,677	1,176	7	1,184	20,993	1,168	22,161
2005	963	49	1,012	170	6	176	18,114	1,077	19,191
2006	1,603	52	1,655	1,080	41	1,121	18,160	1,177	19,337
2007	1,109	109	1,218	183	1	184	21,539	2,194	23,733
2008	1,465	126	1,591	1,027	11	1,038	21,106	1,988	23,094
2009	2,037	129	2,165	164	4	168	25,858	1,852	27,710
2010	1,326	77	1,403	984	2	986	17,644	1,535	19,179
2011	1,368	107	1,475	166	3	169	23,362	1,711	25,073
2012	1,142	42	1,184	562	90	652	17,125	1,370	18,495
2013	1,128	64	1,193	78	2	80	19,488	1,748	21,236
2014	2,096	172	2,269	990	74	1,063	20,262	2,645	22,907
2015	920	71	992	189	2	191	14,620	2,009	16,629
2016	1,249	133	1,382	951	95	1,046	15,249	1,935	17,183
2017	2,564	135	2,699	114	12	127	17,948	2,447	20,396
2018	1,729	93	1,823	445	55	500	14,319	3,285	17,604
2019	1,076	147	1,223	157	13	171	16,280	4,120	20,400
2020	936	49	985	344	10	354	22,169	2,905	25,073
2021 ^a	191	23	214	7	2	9	6,634	1,267	7,901
2022 ^a	241	22	263	355	18	373	10,024	2,023	12,048
2023	332	36	368	62	32	94	17,937	5,055	22,991
2024 ^b	358	51	408	384	35	419	14,540	8,641	23,181
5-year average (2019–2023)	555	55	610	185	15	200	14,609	3,074	17,683
10-year average (2014–2023)	1,133	88	1,222	361	31	393	15,544	2,769	18,313
Historical average (1997–2023)	1,194	79	1,273	447	21	468	17,859	1,885	19,744

Source ADF&G Division of Subsistence, ASFDB 2024 (ADF&G 2024).

Note Some harvest reports indicate "Wood River" as the location fished and may include salmon taken in the lower Wood River, which is inside the Nushagak Bay Noncommercial fisheries area.

a. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

b. Data are preliminary.

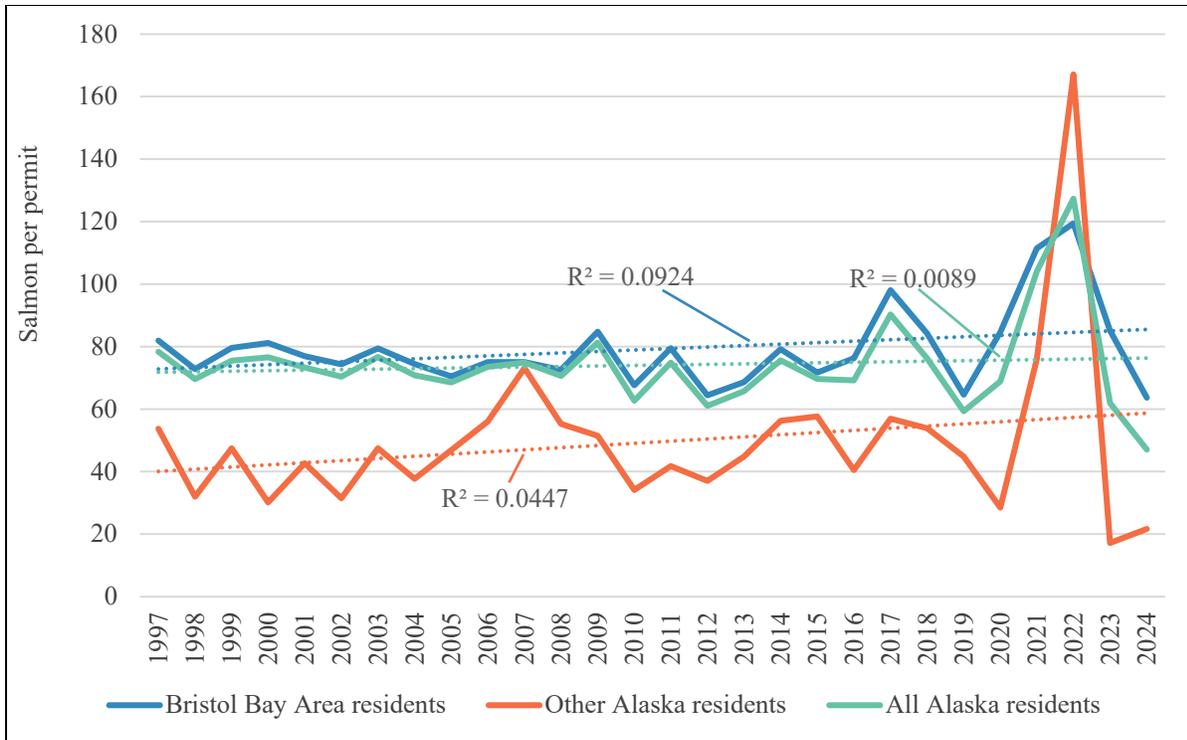


Figure 3-5.—Average subsistence salmon harvest per permit, in individual fish, by residency type, Nushagak Bay Noncommercial area, Bristol Bay Area, Alaska, 1997–2024.

4. EGEGIK SUBSISTENCE SALMON FISHERY

COMMUNITIES AND POPULATION

The only community within the Egegik District is Egegik, which had an estimated population of 29 people in 2024 (Table 1-1). The most recent household surveys to take place in Egegik collected salmon harvest and use data for 2014 and those data may be found in a technical report by Sill et al. (2022) as well as in the online CSIS.

GENERAL PATTERNS OF SUBSISTENCE HARVESTS

The majority of permits issued for this subsistence fishery are issued to residents of communities other than Egegik (Table 4-1). Subsistence salmon harvests in the Egegik District are dominated by sockeye salmon harvests (Appendix Table C-3). Sockeye salmon runs in the Egegik River have consistently been within the escapement goal range since 2004 (Elison et al. 2025). There has been a declining trend in both the number of permits issued and in estimated salmon harvests over time. The historical (1985–2023) average for all salmon harvested was 2,289 fish; the recent 10-year (2014–2023) average harvest was approximately one-half the historical average and the recent 5-year (2019–2023) average was slightly less than one-half of the 10-year average. Similarly, the number of permits issued by the department has decreased from 40 permits on average over the historical time period to 13 permits issued on average during 2019–2023. Note that 2021 and 2022 were the years with lowest number of permits issued (6 and 3, respectively), and the smallest estimated salmon harvests (498 fish and 163 fish, respectively). As noted previously, in 2021 and 2022 the online permit reporting system did not request households to provide the anticipated fishing location; location data were provided only on returned permits. Therefore, the department was not able to develop estimates by area fished to account for harvests on unreturned permits, which likely resulted in an underestimation of permits and harvests in the Egegik District in these years. In 2023 and 2024, the number of permits issued and estimated harvests more closely resembled recent years prior to 2021. Since the community of Egegik is within the boundaries of the Egegik commercial fishing district, and subsistence fishing is only open during commercial fishing times, the majority of subsistence salmon harvests occur during the commercial openings within the district.⁶

EGEGIK SUBSISTENCE HARVEST BY LOCATION

The department requests harvest location information on BBA subsistence permits but leaves the specificity of the location up to the individual fisher. In 2008 and 2009, the department only requested fishers report the district that was to be fished, not specific locations on the permit. From 2010 onward, the fisher has been responsible for identifying the district and location to be fished when a permit is issued. The department groups the reported locations into the following areas: Commercial District, Egegik, Coffee Point, Egegik Beach, Egegik District Site Unknown, and the King Salmon River. Each of these locations is within the commercial fishing district boundary, except for the King Salmon River. It is possible that other harvest locations have been used outside of the commercial fishing boundary, but no specific places have been reported. As a result, most permits are issued for, and the majority of salmon harvests occur within, the commercial fishing district boundary (Table 4-2). Whether inside or outside of the commercial district, sockeye and coho salmon are the main species harvested. From 2008 through 2024, a total of 15,217 sockeye salmon and 3,817 coho salmon were harvested from within the commercial fishing district boundary. In comparison, 1,962 sockeye salmon and 98 coho salmon were harvested outside the commercial fishing district boundary (i.e., in the King Salmon River). Since 2008, the department has issued a total of 35 permits for fishing in the King Salmon River, averaging 2 permits per year. More permits were issued to fish in the King Salmon River in 2023 and 2024 than in any other year (11 and 9 permits, respectively). In comparison, a total of 425 permits were issued to fish within the Egegik District

6. Only the Nushagak District has a subsistence regulation that indicates that the commissioner shall (by emergency order) open the subsistence fishery when commercial fishing is closed (5 AAC 01.310(b)).

commercial fishing area boundary, with an average of 25 permits issued per year. For years when the King Salmon River is fished, fishers harvest more fish per permit than do fishers in waters inside the commercial district boundary. Salmon harvests per permit are presented in two ways on Table 4-2: as an annual average harvest per permit and as a total average harvest per permit. The annual averages are calculated using the simple average of per-permit harvests from each year. Years when there was no fishing effort in the King Salmon River assumes 0 harvests for the year to account for all 17 years covered in this table. This results in an average harvest of 26 salmon per permit for the King Salmon River and 50 salmon per permit for areas within the commercial fishing district. In contrast, the table also provides the average salmon harvest per permit calculated from the total harvest of locations inside the commercial fishing district and the total harvest from outside the commercial districts and divides them by the number of permits in each category. Calculated this way, it is evident that when the King Salmon River is fished, fishers harvest an average of 67 salmon per permit, compared to a harvest of 47 salmon per permit for locations inside the district.

EGEGIK LOCAL AND NONLOCAL PERMIT INFORMATION

As noted above, the majority of permits issued in this fishery go to Alaska residents who do not live in Egegik. From 2008 through 2023, an average of seven permits were issued to Egegik residents, compared to an average of 20 permits issued to nonlocal Alaskans (Table 4-1). Since 2008, from 6% to 54% of permits issued annually have been issued to Egegik residents. During the 10-year period 2014–2023, an average of five permits were issued to Egegik residents, which then declined to three permits for the recent five-year average during 2019–2023. The 10- and 5-year average number of permits issued to other Alaska residents were 15 and 11, respectively. Alaskans residing elsewhere and traveling to Egegik to subsistence fish often have ties to the community. Community members noted that past residents who no longer live year-round in Egegik maintain strong ties to family as well as to the economy and way of life in the region (Hutchinson-Scarborough et al. 2020).

Table 4-1.—Number of subsistence salmon permits issued, Egegik District, Bristol Bay Area, Alaska, 2008–2024.

Year	Number of permits issued		Total
	Egegik residents	Other Alaska residents	
2008	11	26	37
2009	8	18	26
2010	10	27	37
2011	10	27	37
2012	9	29	38
2013	10	34	44
2014	8	28	36
2015	6	26	32
2016	14	12	26
2017	2	21	23
2018	8	14	22
2019	6	18	24
2020	5	12	17
2021	1	5	6
2022	1	2	3
2023	1	16	17
2024 ^a	1	16	17
5-year average (2019–2023)	3	11	13
10-year average (2014–2023)	5	15	21
Historical average (2008–2023)	7	20	27

Source ADF&G Division of Subsistence, Bristol Bay subsistence salmon permit database.

a. Data are preliminary.

Table 4-2.--Estimated subsistence salmon harvests by site, Egegik District, Alaska, 2008–2024.

Year	Site	Permits issued	Estimated salmon harvest					Total	Salmon per permit
			King	Sockeye	Coho	Chum	Pink		
2008	<i>Egegik (Total)</i>	37	91	1,502	295	35	4	1,928	52
2009	<i>Egegik (Total)</i>	26	31	778	133	6	5	953	37
2010	<i>Egegik (Total)</i>	40	96	1,658	346	60	8	2,167	54
	Inside the district subtotal	40	96	1,658	346	60	8	2,167	54
	Coffee Point	2	3	1	71	1	0	76	38
	Commercial District	2	1	20	0	0	0	21	11
	Egegik	36	92	1,637	275	59	8	2,070	58
2011	<i>Egegik (Total)</i>	37	91	1,772	377	23	2	2,264	61
	Inside the district subtotal	37	91	1,772	377	23	2	2,264	61
	Commercial District	1	0	0	0	0	0	0	0
	Egegik	36	91	1,772	377	23	2	2,264	63
2012	<i>Egegik (Total)</i>	39	37	1,172	190	19	7	1,425	37
	Inside the district subtotal	39	37	1,172	190	19	7	1,425	37
	Egegik	36	37	1,165	178	19	7	1,406	39
	Egegik Beach	3	0	7	12	0	0	19	6
2013	<i>Egegik (Total)</i>	47	46	2,109	206	17	7	2,385	51
	Inside the district subtotal	47	46	2,109	206	17	7	2,385	51
	Coffee Point	2	1	69	1	1	0	71	36
	Commercial District	2	2	116	13	0	0	131	66
	Egegik	42	42	1,894	168	16	6	2,126	51
	Egegik Beach	1	0	30	25	0	1	56	56
2014	<i>Egegik (Total)</i>	38	150	972	237	4	2	1,366	36
	Inside the district subtotal	37	133	956	237	4	2	1,333	36
	Coffee Point	5	0	0	0	0	0	0	0
	Commercial District	1	0	0	0	0	0	0	0
	Egegik	29	133	956	237	4	2	1,333	46

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Table 4-2.-Page 2 of 4.

Year	Site	Permits issued	Estimated salmon harvest					Total	Salmon per permit
			King	Sockeye	Coho	Chum	Pink		
	Egegik District Site (Unknown)	2	0	0	0	0	0	0	0
	Outside the district subtotal	1	17	16	0	0	0	33	33
	King Salmon River	1	17	16	0	0	0	33	33
2015	<i>Egegik (Total)</i>	33	150	1,253	353	38	13	1,806	55
	Inside the district subtotal	26	59	869	326	18	9	1,280	49
	Coffee Point	2	0	0	0	0	0	0	0
	Commercial District	2	0	41	0	0	0	41	21
	Egegik	12	42	427	250	5	1	725	60
	Egegik Beach	9	17	401	76	13	8	514	57
	Egegik District Site (Unknown)	1	0	0	0	0	0	0	0
	Outside the district subtotal	7	91	384	27	20	4	526	75
	King Salmon River	7	91	384	27	20	4	526	75
2016	<i>Egegik (Total)</i>	28	27	366	167	3	0	563	20
	Inside the district subtotal	27	27	341	167	3	0	538	20
	Coffee Point	4	0	0	0	0	0	0	0
	Egegik	17	11	292	164	3	0	470	28
	Egegik Beach	3	16	49	3	0	0	68	23
	Egegik District Site (Unknown)	3	0	0	0	0	0	0	0
	Outside the district subtotal	1	0	25	0	0	0	25	25
	King Salmon River	1	0	25	0	0	0	25	25
2017	<i>Egegik (Total)</i>	25	129	1,243	430	13	6	1,821	73
	Inside the district subtotal	23	20	1,093	430	13	6	1,562	68
	Coffee Point	2	0	0	0	0	0	0	0
	Egegik	20	19	1,071	430	13	6	1,539	77
	Egegik Beach	1	1	22	0	0	0	23	23
	Outside the district subtotal	2	109	150	0	0	0	259	130
	King Salmon River	2	109	150	0	0	0	259	130

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Table 4-2.-Page 3 of 3.

Year	Site	Permits issued	Estimated salmon harvest					Total	Salmon per permit
			King	Sockeye	Coho	Chum	Pink		
2018	<i>Egegik (Total)</i>	24	48	540	548	16	9	1,161	48
	Inside the district subtotal	24	48	540	548	16	9	1,161	48
	Coffee Point	1	0	0	0	0	0	0	0
	Commercial District	1	0	0	0	0	0	0	0
	Egegik	15	21	386	489	8	7	911	61
	Egegik Beach	5	27	153	59	8	2	249	50
	Egegik District Site (Unknown)	2	0	0	0	0	0	0	0
2019	<i>Egegik (Total)</i>	25	39	770	284	6	2	1,100	44
	Inside the district subtotal	21	39	650	284	1	0	973	46
	Coffee Point	1	34	97	0	0	0	131	131
	Egegik	20	5	553	284	1	0	842	42
	Outside the district subtotal	4	0	120	0	5	2	127	32
	King Salmon River (Egegik)	4	0	120	0	5	2	127	32
2020	<i>Egegik (Total)</i>	18	13	560	157	2	0	732	41
	Inside the district subtotal	18	13	560	157	2	0	732	41
	Egegik	17	11	530	157	0	0	698	41
	Egegik Beach	1	2	30	0	2	0	34	34
2021	<i>Egegik (Total)</i>	6	8	391	97	2	0	498	83
2022	<i>Egegik (Total)</i>	3	2	161	0	0	0	163	54
2023	<i>Egegik (Total)</i>	17	32	894	42	11	0	979	58
	Inside the district subtotal	6	15	280	25	1	0	321	54
	Egegik	3	14	144	0	0	0	158	53
	Egegik Beach	3	1	136	25	1	0	163	54
	Outside the district subtotal	11	17	614	17	10	0	658	60
	King Salmon River	11	17	614	17	10	0	658	60

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Table 4-2.–Page 4 of 4.

Year	Site	Permits issued	Estimated salmon harvest					Total	Salmon per permit
			King	Sockeye	Coho	Chum	Pink		
2024^a	<i>Egegik (Total)</i>	<i>17</i>	<i>33</i>	<i>1,038</i>	<i>54</i>	<i>7</i>	<i>11</i>	<i>1,144</i>	<i>67</i>
	Inside the district subtotal	8	28	385	1	4	1	419	52
	Egegik	6	25	294	1	4	1	325	54
	Egegik Beach	2	3	91	0	0	0	94	47
	Outside the district subtotal	9	6	653	53	3	10	725	81
	King Salmon River	9	6	653	53	3	10	725	81
	Annual average inside district (2008–2024)	25	46	895	225	13	4	1,182	50
	Annual average outside district (2008–2024)	2	14	115	6	2	1	138	26
	Annual average total Egegik District (2008–2024)	27	60	1,011	230	15	5	1,321	51
	Subtotal inside district (2008–2024)	425	783	15,217	3,817	223	60	20,100	47
	Subtotal outside district (2008–2024)	35	240	1,962	98	38	16	2,353	67
	Total Egegik District (2008–2024)	460	1,022	17,179	3,915	261	77	22,453	49

Source ADF&G Division of Subsistence, Bristol Bay subsistence salmon permit database.

a. Data are preliminary.

5. UGASHIK SUBSISTENCE SALMON FISHERY

COMMUNITIES AND POPULATION

The Ugashik District contains the community of Pilot Point with an estimated population of 53 people in 2024 (Table 1-1). The community of Ugashik is upstream of the Ugashik District and had a 2024 population of 3. The most recent household-based subsistence salmon research to take place in Ugashik occurred for study year 2014, and those data may be found in a technical report by Sill et al. (2022) as well as in the online CSIS.

GENERAL PATTERNS OF SUBSISTENCE HARVESTS

Subsistence salmon harvests in the Ugashik District are dominated by sockeye salmon harvests (Appendix Table C-4). Sockeye salmon escapement in the Ugashik River has been within the escapement goal range for most years since 2004 (Elison et al. 2025). The department has issued fewer permits for the Ugashik District over time. Since 1985, the department has issued 21 permits annually on average, with 13 permits issued on average during the 10-year period spanning 2014–2023, and seven permits issued on average from 2019 through 2023. There has also been an overall declining trend in harvests since 1985. The estimated historical average for all salmon harvested is 1,460 fish, while the previous 10-year (2014–2023) average was 771 salmon. The recent five-year (2019–2023) average is 353 salmon. Several factors contextualize these recent low harvest and permit numbers. A sharp decline in permits and harvests was reported in 2020. This is likely a result of lower fishing effort due to travel restrictions resulting from COVID-19: in 2020 only four permits were issued compared to 17 in 2019. As noted previously, in 2021 and 2022 the online permit reporting system did not request households to provide the anticipated fishing location; location data were provided only on returned permits. Therefore, the department was not able to develop estimates by area fished to account for harvests on unreturned permits, which likely resulted in an underestimation of permits and harvests in the Ugashik District in these years. However, 2023 and 2024 estimated harvests and issued permits were among the lowest on record, continuing this declining trend.

6. TOGIAK SUBSISTENCE SALMON FISHERY

COMMUNITIES AND POPULATION

The Togiak District is home to two communities, Togiak and Twin Hills, with populations of 721 and 93, respectively, in 2024 (Table 1-1). The most recent household harvest surveys in these communities documented salmon harvest and use for 2016 and 2017 and those data may be found in a technical report by Jones et al. (2019) as well as in the online CSIS.

GENERAL PATTERNS OF SUBSISTENCE HARVESTS

The first exception that the board made for allowable subsistence gear for the BBA occurred in the Togiak District, where it allowed spear fishing. Subsistence drift gillnetting (with a 10-fathom net) may also occur between the mouth of the Togiak River and upstream approximately 2 miles to a specific line across the river designated by latitude and longitude locations. Appendix Table C-5 shows historical harvests in the Togiak District from 1985–2024. Sockeye salmon have composed the majority of the salmon harvest, followed by king salmon. Sockeye salmon escapement in the Togiak River has consistently met escapement goal ranges since 2004 (Elison et al. 2025). Harvests in the Togiak District have declined slightly over time. The historical average harvest was 4,975 estimated salmon and the recent 10-year (2014–2023) average was 4,725 salmon. The number of permits issued by the department has remained stable with a historical average of 48 permits and a 10-year (2014–2023) average of 45 permits. Recent five-year (2019–2023) averages show that the decline in permits issued, and that a previously slight decline in harvests, have become more pronounced in recent years. However, in 2021 and 2022 the online permit reporting system did not request households to provide the anticipated fishing location; location data were provided only on returned permits. Therefore, the department was not able to develop estimates by fishing area to account for harvests on unreturned permits, which likely resulted in an underestimation of permits and harvests in the Togiak District in these years. While substantially fewer permits were issued in 2024 than the historical or recent 5- and 10-year averages, the estimated 2024 subsistence salmon harvest was the highest on record.

7. OTHER SUBSISTENCE FISHERIES

SUBSISTENCE REGULATIONS

The board determined that all finfishes of the BBA support customary and traditional uses (5 AAC 01.336) with an amount reasonably necessary for subsistence (ANS) of 250,000 lb usable weight. This amount was based upon estimates of nonsalmon fish harvests derived from systematic household subsistence harvest surveys conducted by the division (CSIS). The board did not establish an ANS for specific species or more specific stocks of nonsalmon fishes due to the subsistence pattern of use of these resources.

For the most part, subsistence fishing for fishes other than salmon and rainbow trout *O. mykiss* is open year-round in the BBA with gear listed in 5 AAC 01.010. There are no seasonal limits established by regulation. The board repealed a subsistence permit requirement for trout and char in December 2003. The following regulations apply to subsistence fishing for fishes other than salmon in the area:

- Rainbow trout taken incidentally in other subsistence net fisheries or through the ice are lawfully taken and may be retained for subsistence uses (5 AAC 01.310(g)).
- Subsistence fishing with a line attached to a rod or pole is prohibited except when fishing through the ice (5 AAC 01.320(l)).
- Subsistence fishing with nets is prohibited in 18 waters of the Kvichak River/Iliamna Lake drainages and within one-fourth mile of the terminus of those waters from September 1 through June 14 (5 AAC 01.325(c)).

SUBSISTENCE HARVESTS AND USES

A detailed description of subsistence uses of freshwater fishes in the BBA appears in Fall et al. (1996), and specifically for the Kvichak River watershed in Krieg et al. (2005). Wright and Chythlook (1985) describe uses of Pacific herring *Clupea pallasii* spawn on kelp in the Togiak District. Other previous reports documenting subsistence harvest of freshwater fishes in Bristol Bay include BBNA and ADF&G (1996), Coiley-Kenner et al. (2003), Fall et al. (2006), Hazell et al. (2015), Holen et al. (2011; 2012a), Krieg et al. (2005; 2009), and Jones et al. (2021). Fishes other than salmon generally rank third behind salmon and land mammals in their contribution to total subsistence harvests in Bristol Bay communities.

Although subsistence harvests of fishes other than salmon are not annually monitored by the department, division findings from research regarding nonsalmon fishes are summarized in Table 7-1. The majority of households in the BBA use nonsalmon fishes for subsistence purposes. Most households also participate in harvesting these fishes. Harvests, as measured in pounds usable weight per person based on household surveys, vary by community, but are generally substantial. As shown in Figure 1-4, harvests of nonsalmon fishes contributed about 9% to the annual subsistence harvest of wild foods in the BBA from 1987–2018. Table 7-1 shows that for communities outside the regional centers (Dillingham and the Bristol Bay Borough), the harvest of nonsalmon fishes is about 32 lb per person on average. Harvests ranged from a low of 1 lb per person (Pilot Point and Egegik in 2014) to a high of 90 lb per person (Koliganek in 2005). Harvests in five communities exceeded 50 lb per person out of a total of 27 communities.

Table 7-2 presents only those nonsalmon fish species reported as both harvested and used by residents of BBA communities. Harvests and uses of other species may occur. Generally, nonsalmon fishes taken in the largest quantities in the area include various species of smelts and whitefishes, as well as Dolly Varden *Salvelinus malma*, Arctic grayling *Thymallus arcticus*, and northern pike *Esox lucius* (Fall et al. 1996).

In the BBA, harvests of nonsalmon fishes occur throughout the year. Harvest effort by Bristol Bay residents for these fishes is generally lower in the summer when effort is focused on harvesting salmon. Spring is an important harvest time for herring, herring spawn on kelp, and smelts. Smelt harvesting is a popular activity in October and in late winter when these fish can be caught by jigging (Holen et al. 2011; Wright et al.

1985). Substantial harvests of nonsalmon fishes occur in winter; effort increases in late winter prior to breakup as temperatures warm and daylight increases.

Many gear types are used to harvest nonsalmon fishes for home use in the BBA. Rod and reel⁷ is used for most fish. Commercial retention occurs for some species, such as Dolly Varden/Arctic char, herring, and some marine fishes. Other methods are used for a variety of species, including (but not necessarily limited to) the following:

- Fyke nets (“traps”): Alaska blackfish *Dallia pectoralis*, burbot;
- Set lines: burbot;
- Handline jigging during winter: Arctic grayling, Dolly Varden/Arctic char, lake trout *S. namaycush*, smelts, rainbow trout, whitefishes, northern pike;
- Set gillnets: Arctic grayling, Dolly Varden/Arctic char, lake trout, various species of suckers, rainbow trout, herring, northern pike, burbot, whitefishes;
- Beach seines: Dolly Varden/Arctic char, lake trout, whitefishes, smelt, herring;
- Handlines in summer: Pacific halibut *Hippoglossus stenolepis*, rainbow trout;
- Dipnets: smelts, herring.

Herring spawn on kelp is “usually picked by hand although rakes, knives, and uluaqs (...womans’ knife, shaped like an arc)” are also used (Schichnes and Chythlook 1988:127).

Maps of areas used by the BBA communities to harvest nonsalmon fishes appear in the *Alaska Habitat Management Guide Reference Atlas Series* (ADF&G 1985), in Wright et al. (1985), Krieg et al. (2005) for Kvichak River drainage communities only, Fall et al. (2006), Krieg et al. (2009), Holen et al. (2011), and Jones et al. (2021). Harvest activities occur throughout the region in most rivers and lakes, as well as along shorelines. It is likely that most effort occurs near each community and near seasonal camps, such as at Kulukak.⁸

BBA residents use a wide variety of methods to process and preserve their harvests of fishes other than salmon. These vary by species and community. Freezing of many species occurs and other methods for associated species include the following:

- Arctic grayling: dried, half dried, fresh frozen, aged frozen and eaten with seal oil;
- Dolly Varden: dried, smoked, half dried;
- Northern pike: dried, half dried, fresh frozen, aged frozen and eaten with seal oil;
- Rainbow trout: dried, half dried, smoked;
- Whitefishes: dried, fresh frozen, aged frozen and eaten with seal oil.

Dried fish are often eaten with seal oil. Some consumption of fat from brown bears *Ursus arctos* with dried fish also occurs. Smelts are fried, boiled, dried, or eaten frozen with seal oil (Fall et al. 1986:100). Herring are salted or split, dried, and smoked (Schichnes and Chythlook 1988:126). The heads and stomachs of northern pike are boiled and eaten (Schichnes and Chythlook 1991:139). Freshwater fishes that are usually

7. Respondents to Division of Subsistence harvest surveys generally do not describe or mention that their subsistence fishing efforts occur under state sport fishing regulations or federal subsistence regulations. Therefore, effort could occur under state sport fishing regulations or federal subsistence regulations.

8. See Wright and Chythlook (1985) and Schichnes and Chythlook (1988) for maps of herring camps at Kulukak Bay. For frequency of use of various areas for freshwater fishing by Nushagak River communities, see Schichnes and Chythlook (1991).

eaten frozen with seal oil are categorized into a group called kumlaneq. This includes Arctic grayling, whitefishes, lake trout, and northern pike (Fall et al. 1986:102).

Much traditional knowledge is associated with nonsalmon fishes. For example, a Central Yup'ik taxonomic classification system for freshwater fishes has three entries, and thus three taxa, for the same fish that fisheries biologists classify as only Dolly Varden/Arctic char. Distinctions in Central Yup'ik taxonomy depend on the season of harvest; harvest location; condition of the fish; fish appearance; and the harvest, processing, and preparation methods of the fish (Jones et al. 2021).

Table 7-1.--Uses and harvests of fish other than salmon, communities in Bristol Bay Area, Alaska, 1987–2023.

Community	Year ^a	Percentage of households ^a					Average pounds harvested	
		Use	Fish for	Harvest	Receive	Give	Per household	Per person
Aleknagik	2008	78	69	66	50	44	95	26
Clark's Point	2008	100	100	100	73	73	71	34
Dillingham	2021	74	46	45	57	48	55	19
Egegik	2014	40	30	25	20	15	4	1
Ekwok	1987	76	72	62	62	38	229	69
Igiugig	2013	94	78	61	83	61	15	5
Iliamna	2013	79	69	69	59	31	79	30
King Salmon	2007	57	55	49	16	12	15	5
Kokhanok	2005	74	66	66	51	57	137	36
Koliganek	2005	96	93	93	75	68	323	90
Levelock	2005	86	86	86	50	57	71	40
Manokotak	2023	94	79	79	78	59	254	55
Naknek	2007	76	68	65	48	32	47	18
New Stuyahok	2005	88	78	78	67	47	123	28
Newhalen	2013	88	70	67	73	33	38	12
Nondalton	2013	84	73	73	62	60	147	45
Pedro Bay	2013	73	64	45	55	36	41	17
Pilot Point	2014	65	29	29	41	0	4	2
Port Alsworth	2013	41	37	37	14	8	14	4
Port Heiden	2018	41	26	26	26	26	9	3
South Naknek	2007	86	52	52	67	43	16	8
Togiak	2019	97	82	81	91	80	169	38
Twin Hills	2019	95	70	70	70	55	232	75
Ugashik	2014	100	100	100	25	50	18	14

Source ADF&G Division of Subsistence CSIS.

a. Includes only the most recent year for which data are available.

Table 7-2.--Nonsalmon finfishes reported to be used for subsistence purposes, Bristol Bay Area, Alaska.

Common English name	Scientific name	Yup'ik name(s)	Dena'ina name(s)
Arctic grayling	<i>Thymallus arcticus</i>	<i>Nakrullugpak</i> <i>Culugpauk</i>	<i>Ch'dat'an</i>
Alaska blackfish	<i>Dallia pectoralis</i>	<i>Can'giiq</i>	<i>Huzhegh</i>
Burbot	<i>Lota lota</i>	<i>Manignaq</i> ^a <i>Atgiaq</i> ^b	<i>Ch'unya</i>
Dolly Varden ^c	<i>Salvelinus malma</i>	<i>Yugyaq</i> ^d <i>Anerrluaq</i> <i>Anyuk</i>	<i>Qak'elay</i>
Lake trout	<i>Salvelinus namaycush</i>	<i>Cikignaq</i>	<i>Zhuk'udghuzha</i>
Longnose sucker	<i>Catostomus catostomus</i>	<i>Cungartak</i>	<i>Duch'ehdi</i>
Northern pike	<i>Esox lucius</i>	<i>Cuukvak</i>	<i>Ghelguts'i</i>
Rainbow smelt	<i>Osmerus mordax</i>	<i>Iqalluaq</i>	
Rainbow trout	<i>Oncorhynchus mykiss</i>	<i>Talaariq</i>	<i>Tuni</i>
Broad whitefish ^e	<i>Coregonus nasus</i>	<i>Akakiik</i>	<i>Telay</i>
Humpback whitefish ^e	<i>Coregonus pidschian</i>	<i>Uraruq</i>	<i>Q'untuq'</i>
Round whitefish ^e	<i>Prosopium cylindraceum</i>	<i>Uraruq</i>	<i>Hesten</i>
Least cisco	<i>Coregonus sardinella</i>	<i>Cavirrutnaq</i>	<i>Ghelguts'i k'una</i>
Pacific herring	<i>Clupea pallasii</i>	<i>Iqalluarpak</i>	
Herring spawn on kelp		<i>Melucuaq</i>	
Starry flounder	<i>Platichthys stellatus</i>	<i>Naterna</i>	
Pacific halibut	<i>Hippoglossus stenolepis</i>	<i>Naternarpak</i>	
Pacific cod	<i>Gadus macrocephalus</i>	<i>Ceturtnaq</i>	
Sculpin	Various species	<i>Kayutaq</i>	
Capelin	<i>Mallotus villosus</i>	<i>Cikaaq</i>	
Yellowfin sole	<i>Limanda aspera</i>	<i>Sagiq</i>	

Source Fall et al. (1996).

a. Nushagak River villages.

b. Manokotak, Aleknagik, Twin Hills, Togiak.

c. Also includes the closely related Arctic char.

d. At Togiak, Manokotak, and Aleknagik, and perhaps elsewhere, there are 3 Yup'ik names for Dolly Varden/Arctic char. *Yugyak* probably refers to resident Dolly Varden/Arctic char. *Anerrluaq*, called “Togiak trout” in the local English dialect, probably refers to anadromous fish taken in fresh water. Finally, *anyuk*, or “sea-run Dollies,” are Dolly Varden or Arctic char taken in salt waters. See Fall et al. (1996:16–20) for further discussion of these distinctions.

e. Broad whitefish are rare to absent in the Bristol Bay region. *Akakiik* is the word used at Aleknagik and Manokotak to refer to whitefishes they receive from Kuskokwim River communities, where broad whitefish are common. Humpback whitefish are harvested in the Iliamna Lake subregion and are called *uraruq*. *Uraruq* is also used for round whitefish in the Togiak and Nushagak drainages.

8. CONCLUSIONS

This overview has illustrated the continued importance of subsistence fisheries to the mixed cash-subsistence economy and way of life of the BBA communities of Southwest Alaska. Salmon and other fishes provide the largest portion of the substantial subsistence harvests of Bristol Bay communities. In addition to their nutritional and economic value, the subsistence fisheries of the region support cultural and social values and traditions for many Bristol Bay residents. Within the BBA, the Nushagak District ranks highest in subsistence permit use with 587 permits in 2024 (Appendix Table C-6). The Naknek-Kvichak District is second highest, with 334 permits in 2024. Togiak District ranks third, with 27 permits issued, and then Egegik and Ugashik districts at 17 and 1, respectively. Similarly, the Nushagak District ranks highest in number of subsistence salmon harvested, followed by the Naknek-Kvichak District, the Togiak District, the Egegik District, and the Ugashik District.

Historically, subsistence harvests of salmon and other fishes have been fairly stable and reliable, especially compared to the seasonal cash sector of the local community economies. For the BBA, the number of permits issued has remained relatively steady over time; year-to-year variations occur, and, over the last few years, there has been a slight decrease (Table 1-2). Despite this relative stability, subsistence salmon permits demonstrate a decline in subsistence salmon harvests in the BBA. For example, the previous five-year (2019–2023) average number of permits issued (994) for the entire BBA is slightly less than the historical average (1,101 permits); however, the previous five-year average harvest (91,134 salmon) associated with those permits and average salmon harvested per permit (92 salmon) are lower than the historical averages, with 132,631 total salmon harvested and 121 salmon per permit in the BBA. This decline occurred primarily in the Naknek-Kvichak District and where lower average harvests per permit and less participation by local community residents occurred (Appendix Table C1); further research and analysis is needed to understand why this decline has occurred. Changes in salmon abundance in the Naknek-Kvichak District are not likely to be a factor in the decline in subsistence harvests; sockeye salmon stocks in the Naknek and Kvichak rivers have consistently met their respective escapement goals since 2004 and subsistence fishing has not been restricted in the BBA in recent decades. Subsistence sockeye salmon harvests in the Kvichak River watershed, including Iliamna Lake and Lake Clark, which were historically the largest component of the Bristol Bay subsistence salmon fishery, have declined by more than one-half during the 1990s and early 2000s (Figure 2-3). The numbers of sockeye salmon harvested annually since 2016 in the Kvichak River watershed have been the lowest on record. Kvichak River watershed subsistence fishers attribute these lowered harvests to poor returns and lower abundance at once reliable, traditional harvest locations.

REFERENCES CITED

- ADF&G (Alaska Department of Fish and Game). 1985. *Alaska habitat management guide, Southwest region: map atlas*. Alaska Department of Fish and Game Division of Habitat: Juneau. <http://www.arlis.org/docs/vol1/C/AHMG/18134286.pdf>
- . 1986. *Annual management report, 1985, Bristol Bay Area*. Alaska Department of Fish and Game Division of Commercial Fisheries: Anchorage, Dillingham, and King Salmon. <http://www.adfg.alaska.gov/FedAidPDFs/AMR.CF.BB.1986.pdf>
- . 1988. *Annual management report, 1987, Bristol Bay Area*. Alaska Department of Fish and Game Division of Commercial Fisheries: Anchorage. <http://www.adfg.alaska.gov/FedAidPDFs/AMR.CF.BB.1988.pdf>
- . 1991. *1990 Bristol Bay Area annual management report*. Alaska Department of Fish and Game Division of Commercial Fisheries, Regional Information Report No. 2A91-01: Anchorage. <https://www.adfg.alaska.gov/FedAidPDFs/RIR.2A.1991.01.pdf>
- . 1999. *Annual management report, 1998, Bristol Bay Area*. Alaska Department of Fish and Game Division of Commercial Fisheries, Regional Information Report No. 2A99-18: Anchorage. <http://www.adfg.alaska.gov/FedAidPDFs/RIR.2A.1999.18.pdf>
- . 2025. *Alaska Department of Fish and Game staff comments on commercial, personal use, sport, and subsistence regulatory proposals, Committee of the Whole—Groups 1–4 for Bristol Bay finfish, Alaska Board of Fisheries meeting, Anchorage, Alaska, January 13–18, 2026*. Alaska Department of Fish and Game, Regional Information Report No. 5J25-05: Anchorage. https://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2025-2026/bb/adfg-staff-comments_12-17-25.pdf
- BBNA, (Bristol Bay Native Association) and (Alaska Department of Fish and Game) ADF&G. 1996. *The harvest and use of freshwater fish in Togiak and Manokotak, 1994–95*. Bristol Bay Native Association Natural Resource Department, and Alaska Department of Fish and Game Division of Subsistence: Dillingham.
- Behnke, S.R. 1980. *Naknek River subsistence proposals*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 43: Dillingham. <http://www.adfg.alaska.gov/techpap/tp043.pdf>
- Coiley-Kenner, P., T.M. Krieg, M.B. Chythlook, and G. Jennings. 2003. *Wild resource harvests and uses by residents of Manokotak, Togiak, and Twin Hills, 1999/2000*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 275: Juneau. <http://www.adfg.alaska.gov/techpap/tp275.pdf>
- Elison, T., P. Salomone, T. Sands, G. Buck, K. Sechrist, and D. Koster. 2018. *2017 Bristol Bay Area annual management report*. Alaska Department of Fish and Game, Fishery Management Report No. 18-11: Anchorage. <http://www.adfg.alaska.gov/FedAidPDFs/FMR18-11.pdf>
- Elison, T., A. Tiernan, T. Sands, S. Vega, C. Weaver, and J. Terry-Shindelman. 2025. *2024 Bristol Bay Area annual management report*. Alaska Department of Fish and Game, Fishery Management Report No. 25-17: Anchorage. <https://www.adfg.alaska.gov/FedAidPDFs/FMR25-17.pdf>
- Evans, S., M. Kukkonen, D. Holen, and D.S. Koster. 2013. *Harvests and uses of wild resources in Dillingham, Alaska, 2010*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 375: Anchorage. <http://www.adfg.alaska.gov/techpap/TP375.pdf>
- Fall, J.A. 2018. *Subsistence in Alaska: a year 2017 update*. Alaska Department of Fish and Game Division of Subsistence: Anchorage. http://www.adfg.alaska.gov/static/home/subsistence/pdfs/subsistence_update_2017.pdf

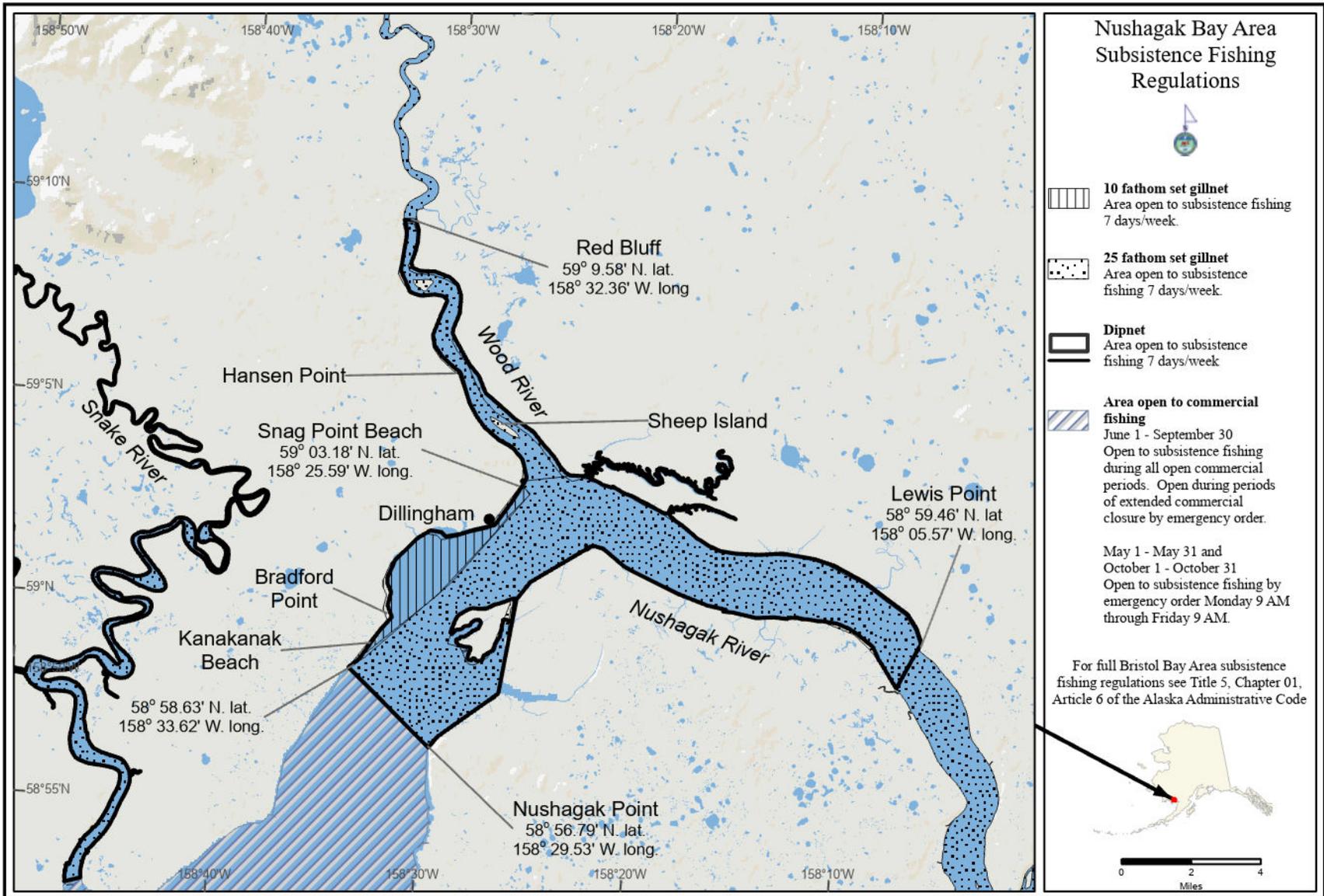
- Fall, J.A., M.B. Chythlook, J.C. Schichnes, and J.M. Morris. 1996. *An overview of the harvest and use of freshwater fish by the communities of the Bristol Bay region, Southwest Alaska*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 166: Juneau. <http://www.adfg.alaska.gov/techpap/tp166.pdf>
- Fall, J.A., D. Holen, T.M. Krieg, R. La Vine, K. Stickman, M. Ravenmoon, J. Hay, and J. Stariwat. 2010. *The Kvichak watershed subsistence salmon fishery: an ethnographic study*. Alaska Department of Fish and Game Division of Subsistence Technical Paper No. 352: Anchorage. <https://www.adfg.alaska.gov/techpap/TP352.pdf>
- Fall, J.A., D.L. Holen, B. Davis, T. Krieg, and D. Koster. 2006. *Subsistence harvests and uses of wild resources in Iliamna, Newhalen, Nondalton, Pedro Bay, and Port Alsworth, Alaska, 2004*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 302: Juneau. <http://www.adfg.alaska.gov/techpap/tp302.pdf>
- Fall, J.A., J.C. Schichnes, M. Chythlook, and R.J. Walker. 1986. *Patterns of wild resource use in Dillingham: Hunting and fishing in an Alaskan regional center*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 135. <http://www.adfg.alaska.gov/techpap/tp135.pdf>
- Halas, G. and M. Cunningham. 2019. *Nushagak River Chinook salmon: local and traditional knowledge and subsistence harvests*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 453: Anchorage. <http://www.adfg.alaska.gov/techpap/TP453.pdf>
- Hazell, S.M., C. Welch, J.T. Ream, S.S. Evans, T.M. Krieg, H.Z. Johnson, and G. Zimpelman. 2015. *Whitefish and other nonsalmon fish trends in Lake Clark and Iliamna Lake, Alaska, 2012 and 2013*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 411: Anchorage. <http://www.adfg.alaska.gov/techpap/TP411.pdf>
- Holen, D.L., S.S. Evans, and B. Jones. 2012a. *The subsistence harvest of herring spawn on kelp in the Togiak District, Alaska, 2011 and 2012*. Alaska Department of Fish and Game Division of Subsistence, Special Publication No. BOF 2012-06: Anchorage. http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2012-2013/bristolbay/sp2_sp2012-006.pdf
- Holen, D.L., T. Krieg, R. Walker, and H. Nicholson. 2005. *Harvests and uses of caribou, moose, bears, and Dall sheep by communities of game management units 9B and 17, western Bristol Bay, Alaska 2001–2002*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 283: Juneau. <http://www.adfg.alaska.gov/techpap/tp283.pdf>
- Holen, D.L., T.M. Krieg, and T. Lemons. 2011. *Subsistence harvests and uses of wild resources in King Salmon, Naknek, and South Naknek, Alaska, 2007*. Alaska Department of Fish and Game, Division of Subsistence Technical Paper No. 360: Anchorage. <http://www.adfg.alaska.gov/techpap/TP360.pdf>
- Holen, D.L., J. Stariwat, T.M. Krieg, and T. Lemons. 2012b. *Subsistence harvests and uses of wild resources in Aleknagik, Clark's Point, and Manokotak, Alaska, 2008*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 368: Anchorage. <http://www.adfg.alaska.gov/techpap/TP368.pdf>
- Hutchinson-Scarborough, L., D. Gerkey, G. Halas, C. Larson, L.A. Sill, J.M. Van Lanen, and M. Cunningham. 2020. *Subsistence salmon networks in select Bristol Bay and Alaska Peninsula communities, 2016*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 459: Anchorage. <http://www.adfg.alaska.gov/techpap/TP459.pdf>
- Jones, B. and M. Cunningham. 2020. *The harvest and use of salmon by residents of King Salmon, Naknek, and South Naknek, Alaska, 2017 and 2018*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 470: Anchorage.

- Jones, B., M. Cunningham, and D. Koster. 2019. *Subsistence harvest assessment and biological sampling of Chinook salmon in the Togiak River drainage*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 454: Anchorage. <http://www.adfg.alaska.gov/techpap/TP454.pdf>
- Jones, B., C. Larson, and R. Tomlin. 2024. *The harvest and use of wild resources in Dillingham, Alaska, 2021*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 499: Anchorage. <https://www.adfg.alaska.gov/techpap/TP499.pdf>
- Jones, B. and G. Neufeld. 2022. *An overview of the subsistence fisheries of the Bristol Bay Management Area, Alaska*. Alaska Department of Fish and Game Division of Subsistence, Special Publication No. BOF 2022-03: Anchorage.
- Jones, B.E., P.E. Crane, C. Larson, and M. Cunningham. 2021. *Traditional ecological knowledge and harvest assessment of Dolly Varden and other nonsalmon fish utilized by residents of the Togiak National Wildlife Refuge*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 482: Anchorage.
- Krieg, T., M. Chythlook, P. Coiley-Kenner, D. Holen, K. Kamletz, and H. Nicholson. 2005. *Freshwater fish harvest and use in communities of the Kvichak watershed, 2003*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 297: Juneau. <http://www.adfg.alaska.gov/techpap/tp297.pdf>
- Krieg, T.M., D.L. Holen, and D. Koster. 2009. *Subsistence harvests and uses of wild resources in Igiugig, Kokhanok, Koliganek, Levelock, and New Stuyahok, Alaska, 2005*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 322: Dillingham. <http://www.adfg.alaska.gov/techpap/TP322.pdf>
- Morris, J.M. 1982. *Naknek River subsistence and personal use fisheries—1982*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 48: King Salmon. <http://www.adfg.alaska.gov/techpap/tp048.pdf>
- Morris, J.M. 1985. *The use of fish and wildlife resources by residents of the Bristol Bay Borough, Alaska*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 123: n.p. <http://www.adfg.alaska.gov/techpap/tp123.pdf>
- Morstad, S. 2000. *Annual management report, 1999, Bristol Bay*. Alaska Department of Fish and Game Division of Commercial Fisheries, Regional Information Report No. 2A00-20: Anchorage. <https://www.adfg.alaska.gov/FedAidPDFs/RIR.2A.2000.20.pdf>
- Morstad, S. and C.E. Brazil. 2012. *Kvichak River sockeye salmon stock status and action plan, 2012: a report to the Alaska Board of Fisheries*. Alaska Department of Fish and Game Divisions of Sport Fish and Commercial Fisheries, Special Publication No. 12-19: Anchorage. <http://www.adfg.alaska.gov/FedAidPDFs/SP12-19.pdf>
- Nelson, M.L., ed. 1970. *Subsistence fishing in Bristol Bay, 1963–1969*. Alaska Department of Fish and Game Division of Commercial Fisheries, Bristol Bay Data Report No. 19: Dillingham. <http://www.adfg.alaska.gov/FedAidPDFs/bbdr.19.pdf>
- Nelson, M.L., D.L. Bill, R.B. Russell, J.R. Skrade, W.A. Bucher, C.P. Meacham Jr., D.N. McBride, and H. Yuen. 1982. *Annual management report, Bristol Bay Area, 1981*. Alaska Department of Fish and Game Division of Commercial Fisheries: Anchorage. <https://www.adfg.alaska.gov/FedAidPDFs/AMR.CF.BB.1982.pdf>
- Salomone, P., S. Morstad, T. Sands, M. Jones, T. Baker, G. Buck, F. West, and T. Krieg. 2011. *2010 Bristol Bay Area annual management report*. Alaska Department of Fish and Game, Fishery Management Report No. 11-23: Anchorage. <http://www.adfg.alaska.gov/FedAidPDFs/FMR11-23.pdf>

- Schichnes, J. and M. Chythlook. 1988. *Use of fish and wildlife in Manokotak, Alaska*. Alaska Department of Fish and Game, Division of Subsistence. <http://www.adfg.alaska.gov/techpap/tp152.pdf>
- . 1991. *Contemporary use of fish and wildlife in Ekwok, Koliganek, and New Stuyahok, Alaska*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 185: Juneau. <http://www.adfg.alaska.gov/techpap/tp185.pdf>
- Sill, L.A., L. Hutchinson-Scarborough, and D. Koster. 2022. *The harvest and use of wild resources in Egegik, Pilot Point, and Ugashik, 2014*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 487: Anchorage. <http://www.adfg.alaska.gov/techpap/TP487.pdf>
- Sill, L.A., C. Wilcox, B. Jones, and M. Cunningham. 2025. *Lake Clark National Park and Preserve: harvest and use of wild resources in Nondalton and Port Alsworth, 2021*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 510: Douglas, AK. <https://www.adfg.alaska.gov/techpap/TP510.pdf>
- U.S. Census Bureau. 2021. *Explore Census Data*. U.S. Department of Commerce, Bureau of the Census, American FactFinder Homepage: Washington, D.C. <https://data.census.gov/>
- Weiland, K., S. Morstad, J.B. Browning, T. Sands, L. Fair, D. Crawford, F. West, and L. McKinley. 2003. *Annual management report, 2002, Bristol Bay*. Alaska Department of Fish and Game Division of Commercial Fisheries, Regional Information Report No. 2A03-18: Anchorage. <http://www.adfg.alaska.gov/FedAidPDFs/RIR.2A.2003.18.pdf>
- Wolfe, R.J. and R.J. Walker. 1987. *Subsistence economies in Alaska: productivity, geography, and development impacts*. Arctic Anthropology 24(2), pages 56–81.
- Wright, J.M. and M.B. Chythlook. 1985. *Subsistence harvests of herring spawn-on-kelp in the Togiak district of Bristol Bay*. Alaska Department of Fish and Game, Division of Subsistence. <http://www.adfg.alaska.gov/techpap/tp116.pdf>
- Wright, J.M., J.M. Morris, and R. Schroeder. 1985. *Bristol Bay regional subsistence profile*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 114: Dillingham. <http://www.adfg.alaska.gov/techpap/tp114.pdf>

**APPENDIX A: BRISTOL BAY SUBSISTENCE
FISHING PERMIT**

**APPENDIX B: DILLINGHAM AREA
REGULATIONS INFORMATION FLYER**





NUSHAGAK AREA SUBSISTENCE SALMON FISHERY



****Subsistence fishers must have a subsistence permit on their person while fishing, and harvests must be recorded on the permit. ****

All areas except the commercial district are open for subsistence fishing seven days per week and 24 hours per day***

COMMERCIAL FISHING NUSHAGAK DISTRICT:

Nushagak District defined as: All waters of Nushagak Bay north of a line from a point from Nichols Hills (58° 33.77' N. lat., 158° 46.57' W. long.) to Etolin Point (58° 39.37' N. lat., 158° 19.31' W. long.), ending in a line from a point on Bradford Point (58° 58.63' N. lat., 158° 33.62' W. long.) to Nushagak Point (58° 56.79' N. lat., 158° 29.53' W. long.)

- Open to subsistence fishing from 9:00 am Monday to 9:00 am Friday, from May 1 – 31 and October 1 – October 31.
- From June 1 – September 30 subsistence salmon may be taken only during COMMERCIAL OPENINGS or by EMERGENCY ORDER (EO).
- The following locations in the Nushagak District are closed to the taking of salmon: (1) those waters north of a line from 58° 58.63' N. lat., 158° 33.62' W. long., to 58° 56.79' N. lat., 158° 29.53' W. long., except that the commissioner may, by emergency order, open the Wood River Special Harvest Area as provided in 5 AAC 06.358

REGULATIONS FOR DILLINGHAM BEACHES**

- “Dillingham Beaches” defined as: All waters from a point approximately two miles south of Bradford Point (58° 58.63' N. lat., 158° 33.62' W. long.) to Snag Point (59° 03.18' N. lat., 158° 25.59' W. long.) **
- On the Dillingham Beaches** set gillnets may not be more than 10 fathoms and may not be set within 100 feet of another set gillnet

REGULATIONS FOR areas outside the Dillingham Beaches

- These are areas NOT included in the Commercial Area (defined above) or the Dillingham Beaches** (defined above)
- Includes Snake, Weary, Igushik, Wood, and Nushagak rivers upstream of the commercial fishing areas
- In these areas, set gillnets may not be more than 25 fathoms in length and may not be set within 300 feet of another gillnet

REGULATIONS FOR DIP NET FISHERY

- The dip net fishery includes: The Dillingham Beaches** (as defined above), extending to Lewis Point (58° 59.46' N. lat., 158° 05.57' W. long.) on the Nushagak River, and Red Bluff (59°09.58' N. lat., 158° 32.36' W. long.) on the Wood River. The dipnet fishery also includes the Igushik, Weary and Snake rivers upstream of the commercial fishing district.
- Dip nets are allowed from the shore only; Dip nets may NOT be operated from a vessel.
- Dip nets may not be operated within 25 feet of other subsistence fishing gear.

****This definition of Dillingham Beaches differs from that historically used. Please read carefully.**

*****All regulations subject to change via Emergency Order *****



During the peak of the salmon run, gillnets can catch more fish than you want to harvest. We encourage actively tending to your net during these periods, to prevent wanton waste. Contact ADFG for updated information on the run strength.



FOR A COMPLETE LIST OF THE REGULATIONS APPLYING TO THE SUBSISTENCE FISHERY, PLEASE REFER TO THE OFFICIAL ADF&G SUBSISTENCE FISHING REGULATIONS, OR CALL OR WRITE: ADF&G, BOX 1030, DILLINGHAM, AK 99576; 842-5925, 842-5227, 267-2455, 267-2368

APPENDIX C: ADDITIONAL TABLES

Appendix Table C-1.—Estimated subsistence salmon harvests, by species, Naknek-Kvichak District, Bristol Bay Area, Alaska, 1985–2024.

Year	Permits issued	Estimated salmon harvest					Total
		King	Sockeye	Coho	Chum	Pink	
1985	544	1,179	107,543	1,103	540	27	110,392
1986	412	1,295	77,283	650	695	2,007	81,930
1987	407	1,289	86,706	1,106	756	490	90,347
1988	391	1,057	88,145	813	588	917	91,520
1989	411	970	87,103	1,927	693	277	90,970
1990	466	985	92,326	726	861	1,032	95,930
1991	518	1,152	97,101	1,056	1,105	191	100,605
1992	571	1,444	94,304	1,152	2,721	1,601	101,222
1993	560	2,080	101,555	2,025	2,476	762	108,898
1994	555	1,843	87,662	1,807	503	460	92,275
1995	533	1,431	75,644	1,791	1,159	383	80,407
1996	540	1,574	81,305	1,482	816	794	85,971
1997	533	2,764	85,248	1,457	478	422	90,368
1998	567	2,433	83,095	1,592	784	1,063	88,967
1999	528	1,567	85,315	856	725	210	88,674
2000	562	894	61,817	937	560	845	65,053
2001	506	869	57,250	740	667	383	59,909
2002	471	837	52,805	943	909	1,137	56,632
2003	489	1,221	61,443	812	259	198	63,934
2004	481	1,075	71,110	566	469	1,080	74,300
2005	462	1,047	69,211	1,224	546	275	72,302
2006	468	881	69,097	720	341	757	71,796
2007	480	672	69,837	1,104	405	262	72,280
2008	481	719	69,823	1,437	404	801	73,184
2009	461	392	67,970	669	167	36	69,235
2010	437	422	62,309	645	233	835	64,445
2011	484	550	67,164	690	215	56	68,675
2012	483	785	72,708	485	127	474	74,579
2013	460	502	62,143	399	403	88	63,535
2014	473	562	65,810	573	272	386	67,603
2015	486	678	69,720	796	263	126	71,583
2016	420	936	53,373	603	252	345	55,508
2017	447	757	51,544	1,346	320	157	54,125
2018	452	943	48,775	1,155	174	183	51,230
2019	432	590	43,349	552	298	101	44,889
2020	380	306	40,181	645	68	70	41,271
2021 ^a	291	203	29,583	512	127	87	30,512
2022 ^a	279	195	31,314	305	41	317	32,172
2023	307	296	35,776	308	126	88	36,595
2024 ^b	334	223	36,211	285	96	179	36,995

-continued-

Appendix Table C-1.–Page 2 of 2.

Year	Permits issued	Estimated salmon harvest					Total
		King	Sockeye	Coho	Chum	Pink	
5-year average (2019–2023)	338	318	36,041	464	132	133	37,088
10-year average (2014–2023)	397	547	46,943	679	194	186	48,549
Historical average (1985–2023)	467	1,010	69,601	967	578	506	110,392

Source ADF&G Division of Subsistence, ASFDB 2024 (ADF&G 2024).

a. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

b. Data are preliminary.

Appendix Table C-2.—Estimated subsistence salmon harvests, by species, Nushagak District, Bristol Bay Area, Alaska, 1985–2024.

Year	Permits issued	Estimated salmon harvest					Total
		King	Sockeye	Coho	Chum	Pink	
1985	406	7,900	38,000	6,100	4,000	600	56,600
1986	424	12,600	49,000	9,400	10,000	5,400	86,400
1987	474	12,200	40,900	6,200	6,000	200	65,500
1988	441	10,079	31,086	5,223	8,234	6,316	60,938
1989	432	8,122	34,535	8,679	5,704	407	57,447
1990	441	12,407	33,003	5,919	7,808	3,183	62,320
1991	528	13,627	33,161	10,784	4,688	292	62,552
1992	476	13,588	30,640	7,103	7,076	3,519	61,926
1993	500	17,709	27,114	5,038	3,257	240	53,358
1994	523	15,490	26,501	5,338	5,055	2,042	54,426
1995	484	13,701	22,793	3,905	2,786	188	43,373
1996	481	15,941	22,935	5,217	4,704	1,573	50,370
1997	538	15,318	25,080	3,433	2,056	218	46,106
1998	562	12,258	25,217	5,316	2,487	1,076	46,355
1999	548	10,057	29,387	3,993	2,409	124	45,969
2000	541	9,470	24,451	5,983	3,463	1,662	45,029
2001	554	11,760	26,939	5,993	3,011	378	48,080
2002	520	11,281	22,777	4,565	5,096	1,179	44,897
2003	527	18,686	25,491	5,432	5,064	403	55,076
2004	511	15,610	17,491	4,240	3,869	1,944	43,154
2005	502	12,529	23,916	5,596	5,006	793	47,841
2006	461	9,971	20,773	3,590	4,448	1,591	40,373
2007	496	13,330	25,127	3,050	3,006	430	44,944
2008	571	12,960	26,828	5,133	4,552	1,923	51,395
2009	530	12,737	26,922	6,777	4,510	355	51,300
2010	528	9,150	22,326	2,983	3,660	1,672	39,791
2011	525	12,461	28,006	5,746	3,055	230	49,498
2012	517	10,350	20,587	2,642	3,072	1,309	37,960
2013	584	11,602	30,283	7,717	4,368	206	54,176
2014	581	16,049	27,073	7,463	5,731	2,110	58,425
2015	591	12,117	25,240	5,644	2,953	295	46,248
2016	643	16,502	27,370	4,766	4,592	4,394	57,624
2017	563	11,122	31,310	5,720	4,026	257	52,434
2018	589	12,206	25,547	4,735	3,635	840	46,963
2019	616	10,206	28,563	5,229	2,996	267	47,262
2020	585	8,350	35,379	4,320	2,040	508	50,597
2021 ^a	373	3,946	25,084	3,184	821	342	33,377
2022 ^a	410	6,446	24,985	1,558	1,099	635	34,723
2023	544	3,366	35,690	4,547	1,053	145	44,801
2024 ^b	587	3,991	38,527	2,577	1,354	844	47,293

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Appendix Table C-2.—Page 2 of 2.

Year	Permits issued	Estimated salmon harvest					Total
		King	Sockeye	Coho	Chum	Pink	
5-year average (2019–2023)	506	6,463	29,940	3,768	1,602	379	42,152
10-year average (2014–2023)	550	10,031	28,624	4,717	2,895	979	47,245
Historical average (1985–2023)	516	11,877	28,141	5,340	4,138	1,263	50,759

Source ADF&G Division of Subsistence, ASFDB 2024 (ADF&G 2024).

a. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

b. Data are preliminary.

Appendix Table C-3.—Estimated subsistence salmon harvests, by species, Egegik District, Bristol Bay Area, Alaska, 1985–2024.

Year	Permits issued	Estimated salmon harvest					Total
		King	Sockeye	Coho	Chum	Pink	
1985	23	14	582	203	21	1	821
1986	41	69	1,052	319	58	21	1,519
1987	49	87	3,350	284	139	2	3,862
1988	52	97	1,405	333	87	54	1,976
1989	50	50	1,636	414	33	1	2,134
1990	61	53	1,105	331	85	39	1,613
1991	70	82	4,549	430	141	32	5,234
1992	80	124	3,322	729	270	51	4,496
1993	69	128	3,633	905	148	15	4,829
1994	59	166	3,208	857	84	153	4,468
1995	60	86	2,818	690	192	100	3,886
1996	44	99	2,321	579	89	85	3,173
1997	34	101	2,438	740	21	5	3,304
1998	36	44	1,795	389	33	52	2,314
1999	42	106	2,434	806	35	2	3,384
2000	31	16	842	262	11	0	1,131
2001	57	111	2,493	928	105	16	3,653
2002	53	65	1,892	356	34	12	2,359
2003	62	84	3,240	297	32	10	3,663
2004	46	169	2,618	1,423	410	91	4,711
2005	45	81	2,267	526	231	2	3,106
2006	41	94	1,641	641	34	7	2,418
2007	28	165	980	334	72	26	1,577
2008	37	91	1,502	295	35	4	1,928
2009	26	31	778	133	6	5	953
2010	37	93	1,657	275	59	8	2,091
2011	37	91	1,772	377	23	2	2,264
2012	38	37	1,172	190	19	7	1,425
2013	44	45	2,108	205	17	5	2,380
2014	36	150	972	237	4	2	1,366
2015	32	150	1,253	353	38	13	1,806
2016	26	27	366	167	3	0	563
2017	23	129	1,243	430	13	6	1,821
2018	22	48	540	548	16	9	1,161
2019	24	39	770	284	6	2	1,100
2020	17	13	560	157	2	0	732
2021 ^a	6	8	391	97	2	0	498
2022 ^a	3	2	161	0	0	0	163
2023	16	32	894	42	11	0	979
2024 ^b	17	33	1,038	54	7	11	1,144

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Appendix Table C-3.–Page 2 of 2.

Year	Permits issued	Estimated salmon harvest					Total
		King	Sockeye	Coho	Chum	Pink	
5-year average (2019–2023)	13	19	555	116	4	0	694
10-year average (2014–2023)	21	60	715	232	9	3	1,019
Historical average (1985–2023)	40	79	1,737	425	67	1	2,330

Source ADF&G Division of Subsistence, ASFDB 2024 (ADF&G 2024).

a. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

b. Data are preliminary.

Appendix Table C-4.—Estimated subsistence salmon harvests, by species, Ugashik District, Bristol Bay Area, Alaska, 1985–2024.

Year	Permits issued	Estimated salmon harvest					Total
		King	Sockeye	Coho	Chum	Pink	
1985	9	17	233	143	7		400
1986	27	83	1,080	335	48	21	1,567
1987	22	104	892	272	51	29	1,348
1988	23	84	1,400	330	55	35	1,904
1989	22	32	1,309	214	35	2	1,592
1990	37	51	1,578	280	143	120	2,172
1991	38	121	1,403	614	168	42	2,348
1992	37	106	2,348	397	79	8	2,938
1993	39	86	1,766	495	107	24	2,478
1994	31	126	1,587	579	42	38	2,372
1995	20	56	1,513	290	18	6	1,883
1996	26	50	1,247	298	21	7	1,623
1997	28	169	2,785	311	39	23	3,327
1998	27	59	1,241	485	75	82	1,942
1999	25	35	1,365	271	5	0	1,675
2000	31	51	1,927	467	34	1	2,481
2001	24	61	1,197	357	8	2	1,624
2002	23	51	1,294	460	14	2	1,821
2003	23	31	1,113	392	30	0	1,567
2004	21	64	804	234	9	4	1,116
2005	22	27	818	249	18	2	1,114
2006	25	41	962	339	6	16	1,364
2007	17	43	1,056	281	88	79	1,546
2008	14	47	1,660	222	17	9	1,955
2009	15	33	1,061	131	4	41	1,270
2010	18	21	896	135	4	0	1,056
2011	15	15	531	136	3	2	687
2012	20	31	997	228	25	0	1,281
2013	14	19	537	106	10	0	672
2014	20	50	566	224	1	0	842
2015	20	53	935	217	8	0	1,214
2016	19	106	1,100	199	20	9	1,432
2107	15	18	444	113	5	2	581
2018	18	81	1,479	293	13	18	1,883
2019	17	54	859	57	7	2	980
2020	4	28	225	38	0	0	291
2021 ^a	3	0	48	0	0	0	48
2022 ^a	7	10	249	60	0	0	319
2023	5	11	112	1	0	1	125
2024 ^b	1	0	85	0	0	0	85

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Appendix Table C-4.–Page 2 of 2.

Year	Permits issued	Estimated salmon harvest					Total
		King	Sockeye	Coho	Chum	Pink	
5-year average (2019–2023)	7	21	299	31	1	1	353
10-year average (2014–2023)	13	41	602	120	5	3	771
Historical average (1985–2023)	21	54	1,093	263	31	16	1,457

Source ADF&G Division of Subsistence, ASFDB 2024 (ADF&G 2024).

Note Blank cells indicate data are not available.

a. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

b. Data are preliminary.

Appendix Table C-5.—Estimated subsistence salmon harvests, Togiak District, Bristol Bay Area, Alaska, 1985–2024.

Year	Permits issued	Estimated salmon harvest					Total
		King	Sockeye	Coho	Chum	Pink	
1985	51	600	3,400	1,500	1,000	100	6,600
1986	29	700	2,400	500	800	100	4,500
1987	46	700	3,600	1,600	1,000	–	6,900
1988	29	429	2,413	792	716	45	4,395
1989	40	551	2,825	976	891	112	5,355
1990	37	480	3,689	1,111	786	60	6,126
1991	43	470	3,517	1,238	553	27	5,805
1992	40	1,361	3,716	1,231	626	135	7,069
1993	38	784	2,139	743	571	8	4,245
1994	25	904	1,777	910	398	77	4,066
1995	22	448	1,318	703	425	0	2,894
1996	19	471	662	199	285	59	1,676
1997	31	667	1,440	260	380	0	2,747
1998	42	782	2,211	310	412	76	3,791
1999	76	1,244	3,780	217	479	84	5,804
2000	54	1,116	3,013	342	569	90	5,130
2001	92	1,612	4,162	388	367	61	6,590
2002	36	703	2,319	241	605	10	3,878
2003	92	1,208	4,403	883	483	451	7,428
2004	46	1,094	1,795	204	383	108	3,584
2005	45	1,528	2,299	295	301	26	4,448
2006	61	1,630	2,728	408	492	354	5,612
2007	48	1,234	2,548	110	420	19	4,332
2008	91	1,337	3,770	541	701	114	6,463
2009	40	827	2,220	272	365	5	3,689
2010	64	1,162	3,256	514	735	113	5,779
2011	68	966	3,462	545	497	42	5,512
2012	53	933	5,265	293	764	84	7,339
2013	64	691	3,695	208	375	33	5,002
2014	59	607	4,586	486	669	190	6,539
2015	48	876	2,387	650	312	23	4,249
2016	70	1,141	3,780	521	377	198	6,017
2017	70	959	5,163	545	544	131	7,341
2018	34	481	2,326	181	192	85	3,264
2019	28	599	1,779	98	143	26	2,645
2020	32	672	2,333	333	314	17	3,670
2021 ^a	33	126	3,280	487	67	13	3,975
2022 ^a	45	561	4,997	438	186	139	6,320
2023	29	263	2,572	251	123	24	3,232
2024 ^b	27	348	6,958	1	167	6	7,479

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Appendix Table C-5.–Page 2 of 2.

Year	Permits issued	Estimated salmon harvest					Total
		King	Sockeye	Coho	Chum	Pink	
5-year average (2019–2023)	33	444	2,992	321	167	44	3,968
10-year average (2014–2023)	45	628	3,320	399	293	85	4,725
Historical average (1985–2023)	48	844	3,001	552	495	85	4,975

Source ADF&G Division of Subsistence, ASFDB 2024 (ADF&G 2024).

Note "-" indicates no data available.

a. In 2021 and 2022, online permits did not require declaring the intended fishing location when permits were issued; the drainage fished was provided only on returned permits. Due to this omission, the five-year averages may not reflect an accurate portrayal of actual fishing activity and do not provide evidence of changed patterns.

b. Data are preliminary.

Appendix Table C-6.—Estimated subsistence salmon harvests, by species and by district and location fished, Bristol Bay Area, Alaska, 2024.

Area and river system	Number of permits issued	Estimated salmon harvest ^{a,b}					Total
		King	Sockeye	Coho	Chum	Pink	
<i>Naknek-Kvichak District</i>	334	223	36,211	285	96	179	36,995
Naknek River drainage	224	222	17,564	285	93	179	18,344
Kvichak River/Iliamna Lake drainages	109	0	18,526	0	2	0	18,528
Igiugig	3	0	213	0	0	0	213
Iliamna Lake	26	0	3,868	0	0	0	3,868
Kijik	2	0	250	0	0	0	250
Kokhanok	29	0	4,528	0	2	0	4,530
Kvichak River	5	0	444	0	0	0	444
Lake Clark-General	22	0	2,866	0	0	0	2,866
Levelock	1	0	57	0	0	0	57
Newhalen River	9	0	2,105	0	0	0	2,105
Nondalton Village	2	0	498	0	0	0	498
Pedro Bay	5	0	470	0	0	0	470
Pile Bay	1	0	96	0	0	0	96
Sixmile Lake	9	0	3,131	0	0	0	3,131
Naknek or Kvichak Site (Unknown)	1	1	121	0	1	0	123
<i>Egegik District</i>	17	33	1,038	54	7	11	1,144
<i>Ugashik District</i>	1	0	85	0	0	0	85
<i>Nushagak District</i>	587	3,991	38,527	2,577	1,354	844	47,293
Igushik/Snake River System	21	140	1,385	75	12	18	1,630
Nushagak Bay Commercial	32	110	1,559	212	191	232	2,304
Nushagak Bay Noncommercial	307	971	20,324	1,058	408	419	23,181
Nushagak River	82	1,971	4,735	651	577	100	8,035
Wood River System	123	428	7,716	473	75	52	8,744
Nushagak Site (Unknown)	45	371	2,809	107	91	22	3,401
<i>Togiak District</i>	27	348	6,958	1	167	6	7,479
<i>Bristol Bay (Unknown)</i>	1	0	0	0	0	0	0
Total	963	4,596	82,820	2,917	1,623	1,040	92,996

Source ADF&G Division of Subsistence, ASFDB 2024 (ADF&G 2025).

Note Harvests are extrapolated for all permits issued based on those returned and the area fished as recorded on the permit. Of the 963 permits issued, 527 were returned.

Note Data are preliminary.

a. Sum of issued permits for sites may exceed totals because permittees may fish more than one site.

b. Sum of rows and columns for estimated salmon harvests may not match totals due to rounding.