Regional Information Report No. 1J25-01

2024 Southern Southeast Inside Subdistrict Sablefish Fishery Management Plan

by

Rhea Ehresmann

January 2025

Alaska Department of Fish and Game **Division of Commercial Fisheries**

Symbols and Abbreviations

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Weights and measures (metric)

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

Weights and measures (English)

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

Time and temperature

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

Physics and chemistry

all atomic symbols	
alternating current	AC
ampere	A
calorie	cal
direct current	DC
hertz	Hz
horsepower	hp
hydrogen ion activity (negative log of)	pH
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

General

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

Mathematics, statistics

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

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by
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ABSTRACT

This report provides an overview of the harvest strategy and regulations effective for the 2024 Southern Southeast Inside (SSEI) sablefish *Anoplopoma fimbria* commercial fishery. The SSEI sablefish commercial fishery is scheduled to open June 1 and close November 15 with legal gear restricted to longline or pots. The 2024 SSEI sablefish commercial fishery annual harvest objective (AHO) is 643,360 round lb and is allocated among the 19 limited entry Commercial Fisheries Entry Commission (CFEC) longline/pot (C61C) and 3 pot (C91C) permits through an equal quota share (EQS) system, resulting in a 2024 EQS of 29,244 round pounds for each permit holder.

Keywords: sablefish, black cod, *Anoplopoma fimbria*, annual harvest objective, AHO, catch per unit effort, CPUE, Southern Southeast, Clarence Strait, SSEI

INTRODUCTION

AREA DESCRIPTION

The Southern Southeast Inside (SSEI) Subdistrict management area consists of all waters as defined in 5 AAC 28.105 (a)(1) (Figure 1).

OVERVIEW

The Alaska Department of Fish and Game (ADF&G) evaluates stock status and establishes the SSEI annual harvest objective (AHO) using commercial fishery and longline survey catch per unit of effort (CPUE) data, fishery and survey biological data (age, weight, length), and stock status trends of sablefish in surrounding geographic areas. These factors are summarized below. No abundance estimate is obtained for the SSEI stock.

SSEI SABLEFISH SEASON

2024 ANNUAL HARVEST OBJECTIVE

The 2024 SSEI AHO is 643,360 round lb, the same as the 2023 AHO (Table 1, Figure 2). Indirect indices of abundance (fishery and survey CPUE data and biological data) are reviewed to determine the percent change in the AHO for a given year because no abundance estimate or population model exists for this stock. Results from the analyses of longline survey CPUE data showed a 40% increase from 2022 to 2023 but preliminary results indicate a 21% decrease from 2023 to 2024 (Figure 3). The pot fishery CPUE increased 10% from 2022 to 2023 (Figure 4). Comparisons of the longline fishery CPUE are confidential due to fewer than 3 vessels fishing with longline gear in 2022, and 2023 values have not yet been calculated due to restructuring issues with the logbook database (Figure 5). There has been a considerable shift from longline gear to pot gear with 3 permit holders fishing pot gear in 2016 and 20 permit holders fishing pot gear in 2022. In 2017, the Commercial Fisheries Entry Commission (CFEC) approved a petition from industry to allow SSEI sablefish C61C longline-gear-only permits to be changed to longline/pot gear permits due to whale depredation issues and concerns from the longline fishery. Since 2017, C61C permits have the flexibility to fish both gear types, while C91C permits remain as pot permits only. Additionally, with the increasing popularity of codcoil or *slinky* pots in Alaska sablefish fisheries, it has become more cost effective for permit holders to convert from longline to pot gear.

Strong recruit classes of sablefish have resulted in a large population of young fish in recent years. Sablefish become reproductively viable around age 4 to 5 years (Mason et al. 1983; Rodgveller et al. 2016). Estimated increases in future spawning biomass will depend on young fish maturing

over the next several years. The 2014 through 2020 year classes comprise more than 75% of the spawning stock biomass (Goethel et al. 2023).

Sablefish movement studies have been conducted for Alaskan inside and outside waters. Sablefish have an estimated 30% chance of moving out of Clarence Strait waters after 1 year of occupancy, generally moving into the eastern Gulf of Alaska (GOA) and British Columbia, Canada (BC) waters (Hanselman et. al 2014). However, the lack of fish greater than 10 years of age in Clarence Strait, particularly the older fecund females, cannot be fully explained by movement and migration given historical patterns in the age data and should be carefully monitored.

The recommended AHO will continue to provide fishery stability and sustainability through conservative management. For the 2024 SSEI fishery, there are 19 longline/pot (C61C) and 3 pot (C91C) permits, resulting in a 2024 Equal Quota Share (EQS) of 29,244 round lb for each permit holder (Table 1).

The following points summarize stock indices in SSEI based on survey and fishery data and provide updates on sablefish stock trends in adjacent waters, as SSEI is geographically connected to the GOA and BC waters.

- SSEI longline survey CPUE (number of fish per hook) increased 40% from 2022 to 2023 while preliminary survey results show survey CPUE decreased 21% from 2023 to 2024; however, the 2023 and 2024 CPUEs still remain greater than the 10-year mean (Figure 3).
- SSEI pot fishery CPUE (round lb per pot) increased 10% from 2022 to 2023 (Figure 4).
- SSEI longline fishery CPUE (round lb per hook) decreased in recent years, most likely due to a substantial shift from longline gear to pot gear (Figure 5). The 2022 longline fishery CPUE remains confidential, and 2023 values have not yet been calculated due to restructuring issues with the logbook database.
- SSEI longline fishery and survey length distributions show positive signs of recruitment with the 2014 through 2020 year classes maturing (Figures 6 and 7).
- SSEI longline fishery and survey age data indicate that catch is comprised of predominately younger individuals (<10 years), that older individuals (>10 years) are less commonly caught in recent years, and that 2014 through 2020 year classes are strong (Figures 8 and 9). Lack of sablefish older than 10 years of age remains concerning for a long-lived species and should continue to be monitored.
- NSEI longline survey CPUE (number of fish per hook) decreased slightly from 2022 to 2023 but has remained above the 10 year-average since 2020.
- Federal longline survey abundance index (relative population numbers) in the GOA demonstrated no change from 2022 to 2023, which followed a 17% increase in 2022 and a 9% increase in 2021 (Goethel et al. 2023).
- Department of Fisheries and Oceans (DFO) Canadian sablefish annual stock assessment was last updated in 2022, at which time spawning stock biomass was estimated to be increasing due to high recruitment events in 2016 and 2017. In 2023, the British Columbia annual pot survey index was 10% less than the 2022 value but still in line with the above-average levels seen since 2018 (K. Holt, Aquatic Sciences Biologist, DFO, Canada, personal communication). Regulations require two 3.5-inch escape rings on pot gear and a 55 cm minimum size limit for sablefish harvested in all Canadian waters.

REGULATIONS

LEGAL GEAR

Sablefish may be taken in the directed SSEI sablefish fishery only by longline and pot gear. CFEC limited entry C61C permits can use both longline and pot gear while C91C permits are restricted to the use of pot gear only. Groundfish pot gear requires individual tunnel eye openings with perimeters 36 inches or less and a sidewall containing an escapement opening equal to or exceeding 18 inches in length; the escapement opening must be parallel to and within 6 inches of the bottom of the pot and must be laced, sewn, or secured together by a single length of untreated, 100-percent cotton twine, no larger than 30 thread of which may be knotted at each end only[5 AAC 39.145 (1)]. Collapsible groundfish pots ("slinky pots") must contain 2 escape mechanism openings in the mesh with each equal to or exceeding 18 inches in length that must be laced, sewn, or secured together by a single length of untreated, 100-percent cotton twine, no larger than 30 thread of which may be knotted at each end only and must be on opposite sides of the pot. If the escape mechanism is placed on the tunnel side, the opening must be in an area that does not include the pot door and within 6 inches of the edge of the pot [5 AAC 39.145 (5)]. Pots must have at least 2 circular escape rings, with a minimum inside diameter 3.75 inches, installed on opposing vertical or sloping walls of the pot [5 AAC 28.130 (f)]. King and Tanner crab pots as described in 5 AAC 34.050 (2) and 5 AAC 35.050 (2) may not be used to take groundfish.

REGISTRATION AND LOGBOOK REQUIREMENTS

Fishers must register prior to fishing [5 AAC 28.106 (b)] and keep a logbook during the fishery. Registration forms and logbooks will be available at ADF&G offices in Southeast Alaska by May 15. Permit holders will receive a PQS tracking form at the time of registration. This form is used to record the total round weight landed for each delivery. Each permit holder must, upon request, provide the buyer with the total round weight of sablefish the permit holder has landed to date. Completed logbook pages must be attached to the ADF&G copy of the fish ticket at the time of delivery. Confidential envelopes for logbook pages may be requested when registering.

Logbooks must include, by set: the date and time gear is set and retrieved; specific location of harvest by latitude and longitude in degrees and decimal minutes for start and ending positions; hook and pot spacing; amount of gear (number of hooks or pots); depth of set; estimated weight of the target and bycatch species retained or discarded. For each set, the target species—sablefish or halibut—must be indicated and if there was any lost gear [5 AAC 28.175 (a)]. A permit holder must retain all visibly injured or dead sablefish. Sablefish that are not visibly injured or dead may be released unharmed. The permit holder must record in the logbook, by set, the number of live sablefish released [5 AAC 28.170 (f)], as well as the discard reason (e.g., fish are small, PQS has been met, etc.).

TAGGED SABLEFISH

Fishers are requested to document tagged sablefish. Please record tag number(s) and attach tags directly to the logbook with the corresponding set information. All persons who return an ADF&G sablefish tag will receive a tag reward (e.g., a hat or t-shirt). Tag returns with valid recovery information (date of recovery, latitude, and longitude) are entered into a random drawing for cash prizes.

FISH TICKET REQUIREMENTS

Landed weights must be recorded on a fish ticket at the time of delivery. If a fisher delivers fish in the round, the total round weight delivered must be recorded on the fish ticket. If a fisher delivers dressed fish, the fish ticket must include the total landed dressed weight as well as the round weight equivalent, determined by using the standard 0.63 recovery rate. There is a 2% percent allowance for ice and slime when unrinsed whole iced sablefish are weighed. A fish ticket must be completed prior to the resumption of fishing and each permit holder must retain onboard their vessel copies of all SSEI sablefish tickets from the current season as well as their updated PQS tracking form. When delivering fish out of state, a completed fish ticket must be submitted to ADF&G prior to transporting fish out of Alaska.

POSSESSION AND LANDING REQUIREMENTS

The holder of a CFEC permit or interim use permit for sablefish may not retain more sablefish in the directed fishery than the annual amount of sablefish EQS specified by ADF&G [5 AAC 28.170 (g)]. However, if a permit holder's harvest exceeds the permit holder's EQS for that year, by not more than 5 percent, ADF&G shall reduce the permit holder's EQS for the following year by the amount of the overage [5 AAC 28.170 (j)]. If a permit holder's harvest exceeds the permit holder's equal quota share by more than 5 percent, the proceeds from the sale of the overage in excess of 5 percent shall be surrendered to the state and the permit holder may be prosecuted under AS 16.05.723. A permit holder may not knowingly exceed a quota share or exceed the EQS in an amount greater than 5 percent as such actions may be prosecuted under AS 16.05.722 or AS 16.05.723 [5 AAC 28.170 (j)]. If a permit holder's harvest is less than the permit holder's EQS for that year, ADF&G shall increase the permit holder's EQS only for the following year by the amount of the underage that does not exceed 5 percent of the EQS [5 AAC 28.170 (k)]. For the 2024 SSEI sablefish fishery, 5 percent of the annual EQS equals 1,462 round lb.

SABLEFISH LIVE MARKET

A permit holder may possess live sablefish for delivery as live product. Upon request of a local representative of ADF&G or law enforcement, however, a permit holder must present sablefish for inspection and allow biological samples to be taken [5 AAC 28.170 (l)].

BYCATCH

SSEI sablefish permit holders may retain and land bycatch within allowable limits (Table 2). The allowable bycatch percentage by species or species group is based on the round weight of sablefish and round weight of bycatch on board the vessel [5 AAC 28.130 (d)(3) and 5 AAC 28.171 (a)]. CFEC permit holders fishing for groundfish or halibut in SSEI must retain, weigh, and report all rockfish taken, including thornyhead rockfish [5 AAC 28.171 (a)]. The demersal shelf rockfish (DSR) assemblage includes yelloweye, quillback, canary, copper, tiger, China, and rosethorn rockfish [5 AAC 39.975 (34)]. All rockfish retained in excess of allowable bycatch limits shall be reported as bycatch overage on an ADF&G fish ticket. All proceeds from the sale of excess rockfish bycatch shall be surrendered to the state. Excess rockfish retained due to full retention requirements may be retained for personal use; however, the pounds must be documented as overage on the fish ticket. A CFEC permit holder fishing for groundfish must retain all Pacific cod when the directed fishery for Pacific cod is open and up to the maximum retainable bycatch amount (20%) of Pacific cod when a directed fishery for Pacific cod is closed [5 AAC 28.070 (e)]. Pacific

cod taken in excess of the bycatch limit in areas open to directed fishing for Pacific cod may be landed on a CFEC miscellaneous saltwater finfish permit designated for the gear that was used.

PROHIBITIONS

A vessel or a person on board a vessel from which commercial, subsistence, or personal use longline fishing gear was used to take fish in the SSEI area during the 72-hour period immediately before the start of the commercial SSEI sablefish fishery, or from which that gear will be used during the 24-hour period immediately after the closure of the SSEI sablefish fishery, may not participate in the taking of sablefish in SSEI during that open sablefish fishing period [5 AAC 28.180 (a)]. The operator of a fishing vessel may not take sablefish in SSEI while sablefish from another area are on board the vessel. Also, the operator of a vessel taking sablefish in SSEI shall unload and submit a completed fish ticket to ADF&G before taking sablefish in another area [5 AAC 28.170 (a) and (b)].

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TABLES AND FIGURES

Table 1.–Annual harvest objective (AHO), equal quota share (EQS, established in 1997), reported harvest (round lb), ex-vessel value, and number of permits in the directed commercial Southern Southeast Inside (SSEI) Subdistrict sablefish fishery, 1986–2024.

Year	AHO	Total harvest	EQS	Ex-vessel value	Number of permits
1986	790,000	554,121	N/A	$260,436	24
1987	790,000	435,501	N/A	$291,785	23
1988	790,000	712,787	N/A	$719,914	27
1989	790,000	952,231	N/A	$714,173	32
1990	790,000	758,663	N/A	$553,823	30
1991	790,000	679,623	N/A	$625,253	31
1992	790,000	936,811	N/A	$936,811	31
1993	790,000	824,011	N/A	$815,770	30
1994	790,000	866,788	N/A	$1,066,149	30
1995	790,000	678,762	N/A	$1,323,585	30
1996	790,000	502,459	N/A	$899,401	30
1997	790,000	725,067	23,200	$1,602,404	35
1998	632,000	578,056	20,400	$813,421	33
1999	720,000	661,424	24,000	$1,199,468	30
2000	696,000	590,815	24,000	$1,176,816	29
2001	696,000	650,678	24,000	$1,249,300	29
2002	696,000	650,339	24,000	$1,287,650	29
2003	696,000	656,936	24,860	$1,506,541	28
2004	696,000	648,845	24,860	$1,030,675	28
2005	696,000	639,719	24,860	$1,351,440	28
2006	696,000	624,832	21,750	$1,434,739	32
2007	696,000	620,168	21,750	$1,514,353	32
2008	696,000	618,033	21,750	$1,854,397	32
2009	634,000	595,748	22,650	$1,764,604	28
2010	634,000	558,633	23,400	$2,069,409	27
2011	583,280	540,931	23,300	$2,720,933	25
2012	583,280	521,825	25,360	$1,906,621	23
2013	583,280	505,599	25,360	$1,394,696	23
2014	536,618	494,830	23,331	$1,719,466	23
2015	536,618	512,580	23,331	$1,851,307	23
2016	482,956	475,466	20,998	$1,893,727	23
2017	516,763	514,205	22,468	$2,391,756	24
2018	578,774	575,264	25,164	$2,382,290	23
2019	590,349	587,166	26,834	$1,716,450	22
2020	572,639	524,561	26,029	$1,247,211	22
2021	601,271	516,161	27,330	$1,349,558	22
2022	643,360	590,263	29,244	$1,833,578	22
2023	643,360	377,986	29,244	$453,583	22
2024	643,360	–	29,244	–	22

Note: N/A = information not applicable for the given year as the EQS was implemented in 1997. En dashes = forthcoming data.

Table 2.–Allowable bycatch that may be legally landed on the Southern Southeast Inside Subdistrict (SSEI) sablefish permit.

Species	Longline gear	Pot gear
All rockfish, including thornyheads	15% in aggregate, of which up to 1% may be DSR	
Lingcod	0%	0%
Pacific cod	20%	20%
Spiny dogfish	35%	20%
Other groundfish	20%	20%

Note: Demersal shelf rockfish (DSR) include yelloweye, quillback, canary, tiger, copper, China, and rosethorn rockfish.

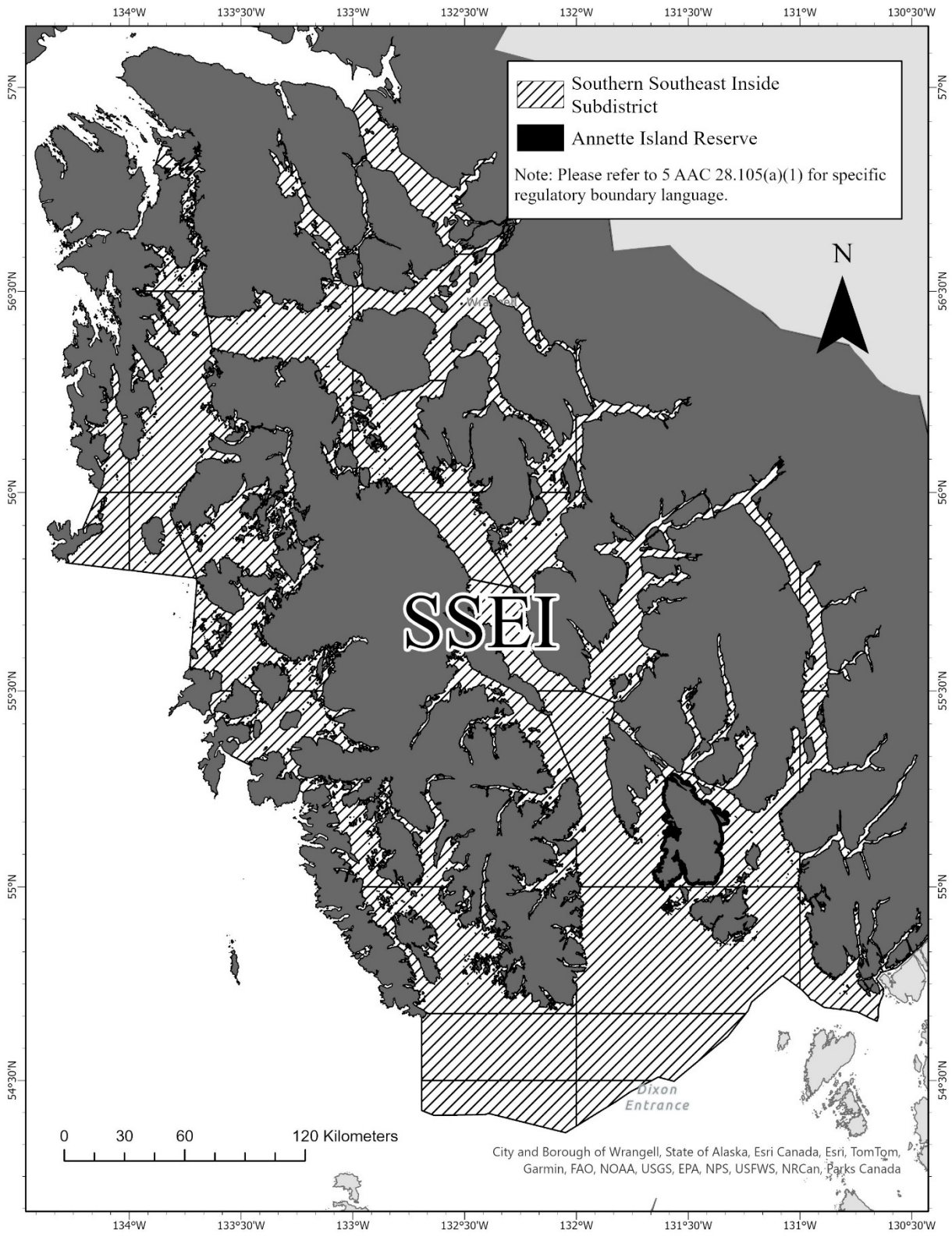

Figure 1.–Southern Southeast Inside (SSEI) Subdistrict.

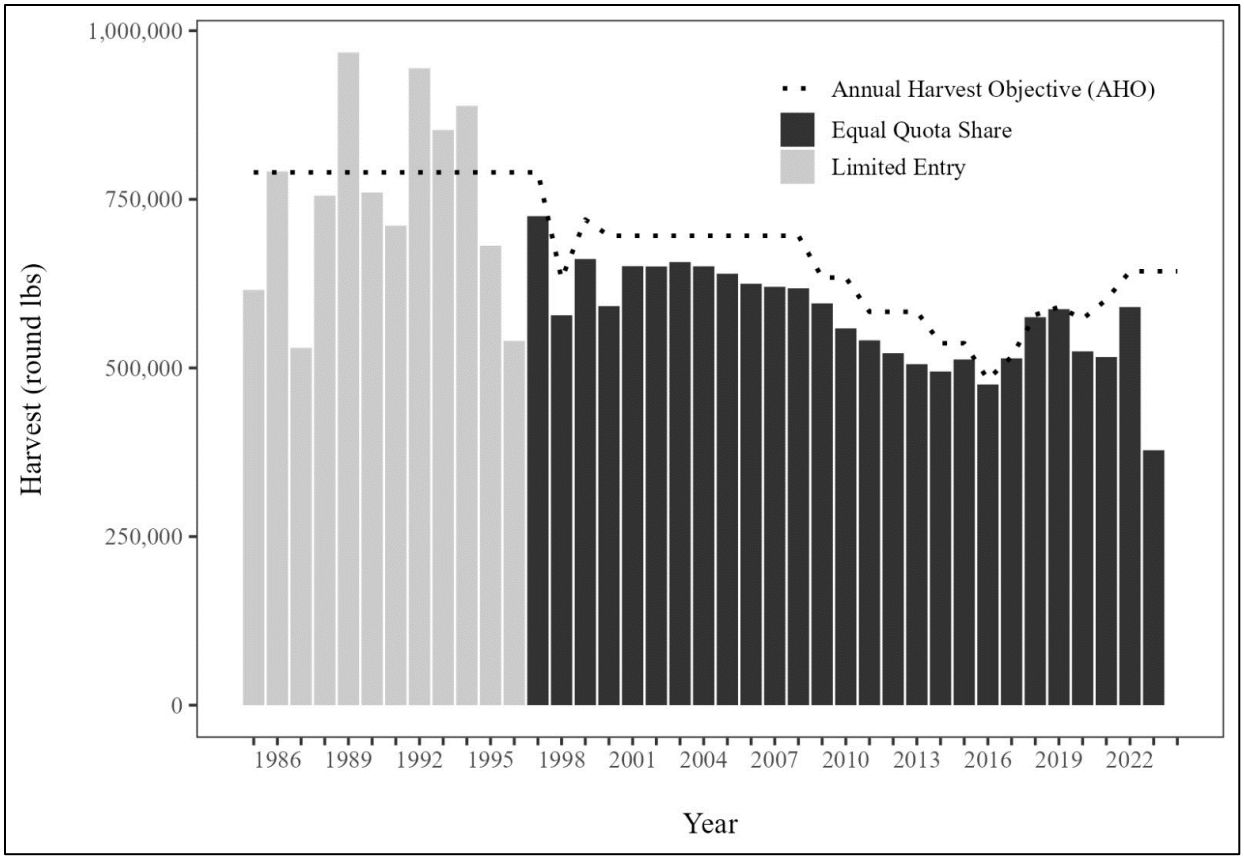

Figure 2.–Southern Southeast Inside Subdistrict (SSEI) sablefish commercial harvest from 1985–2023 with equal quota share being implemented in 1997.

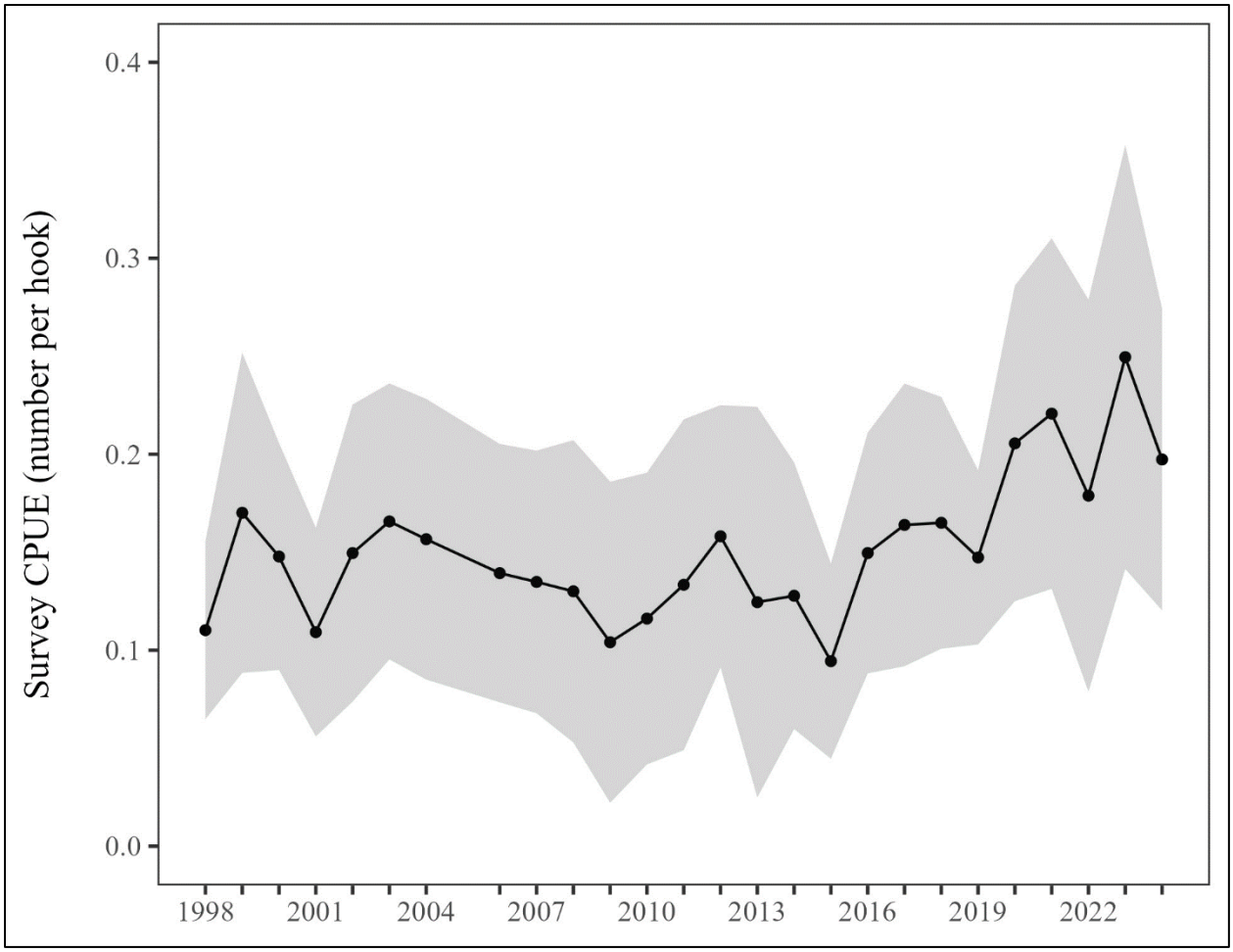

Figure 3.–Southern Southeast Inside Subdistrict (SSEI) sablefish longline survey catch per unit effort (CPUE) in number of sablefish per hook, 1998–2024, except 2005, when no survey occurred due to budget constraints. Error bars show +/- 1 standard deviation in the data. Data for 2024 are preliminary.

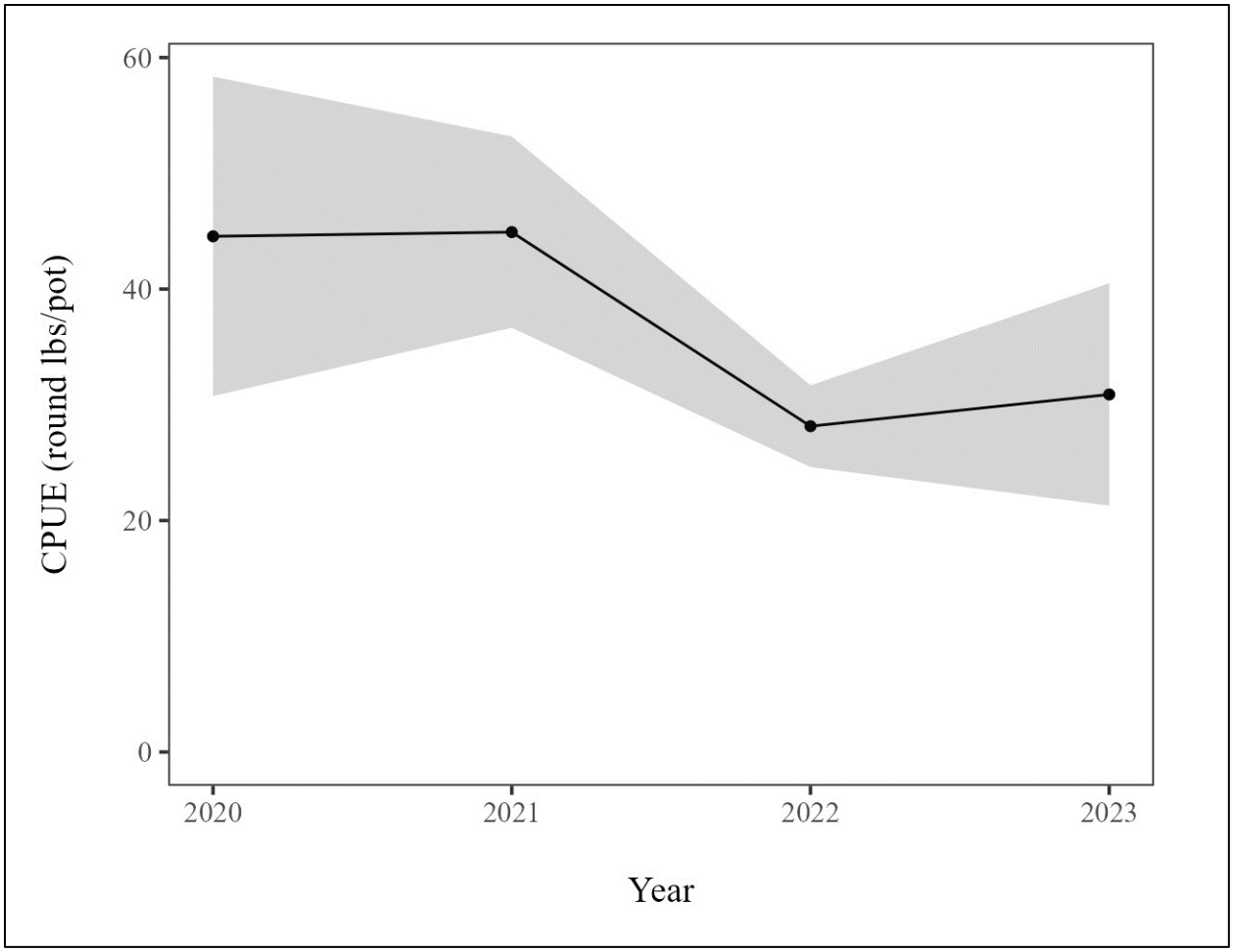

Figure 4.–Southern Southeast Inside Subdistrict (SSEI) sablefish pot fishery catch per unit effort (CPUE) in round lb per pot, 2020–2023. Data are confidential prior to 2020. Error bars show +/- 1 standard deviation in the data.

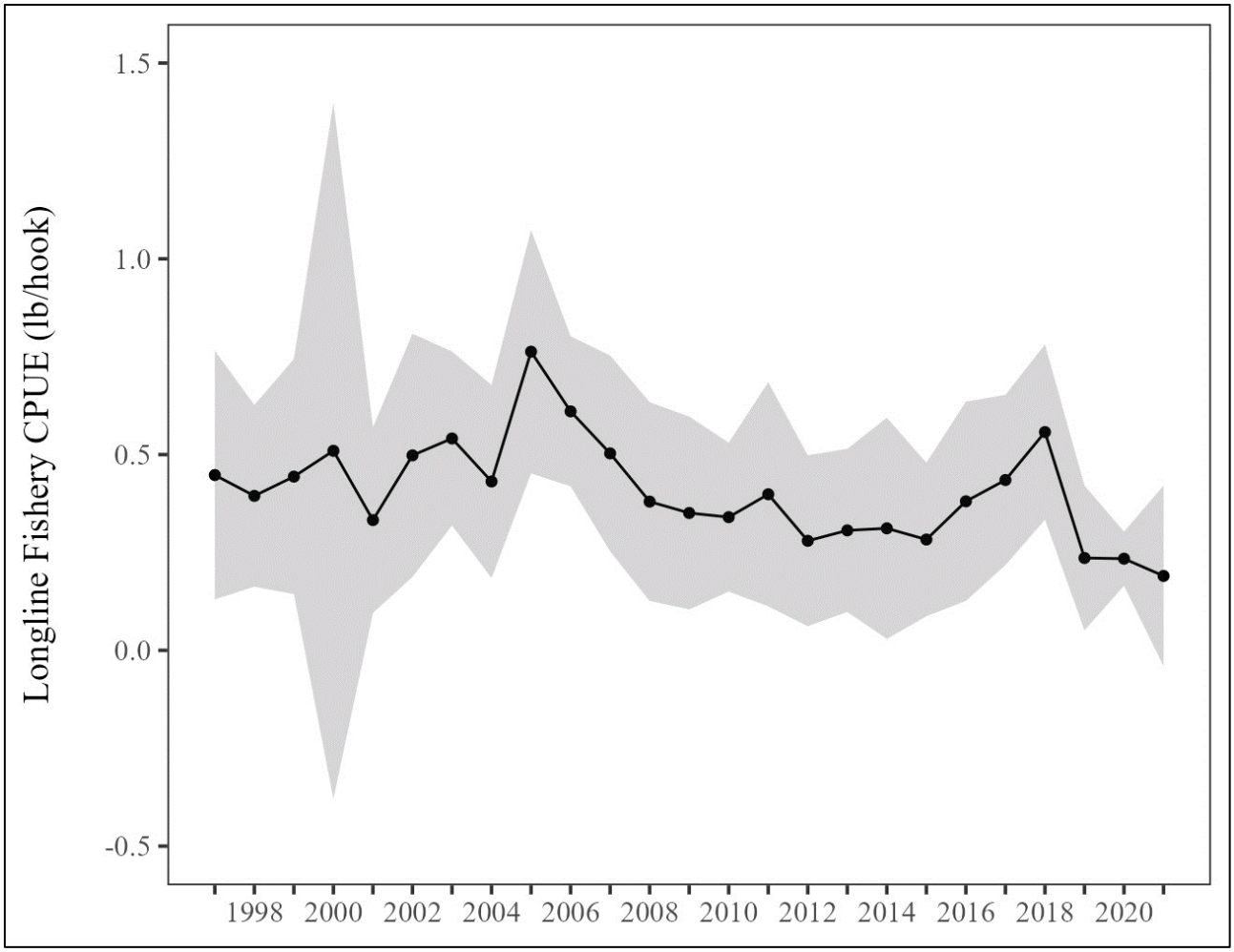

Figure 5.–Southern Southeast Inside Subdistrict (SSEI) sablefish longline fishery catch per unit effort (CPUE) in round lb per hook, 1997–2021. Data are confidential for 2022, and values were not yet calculated for 2023 due to a change in databases. Error bars show +/- 1 standard deviation in the data.

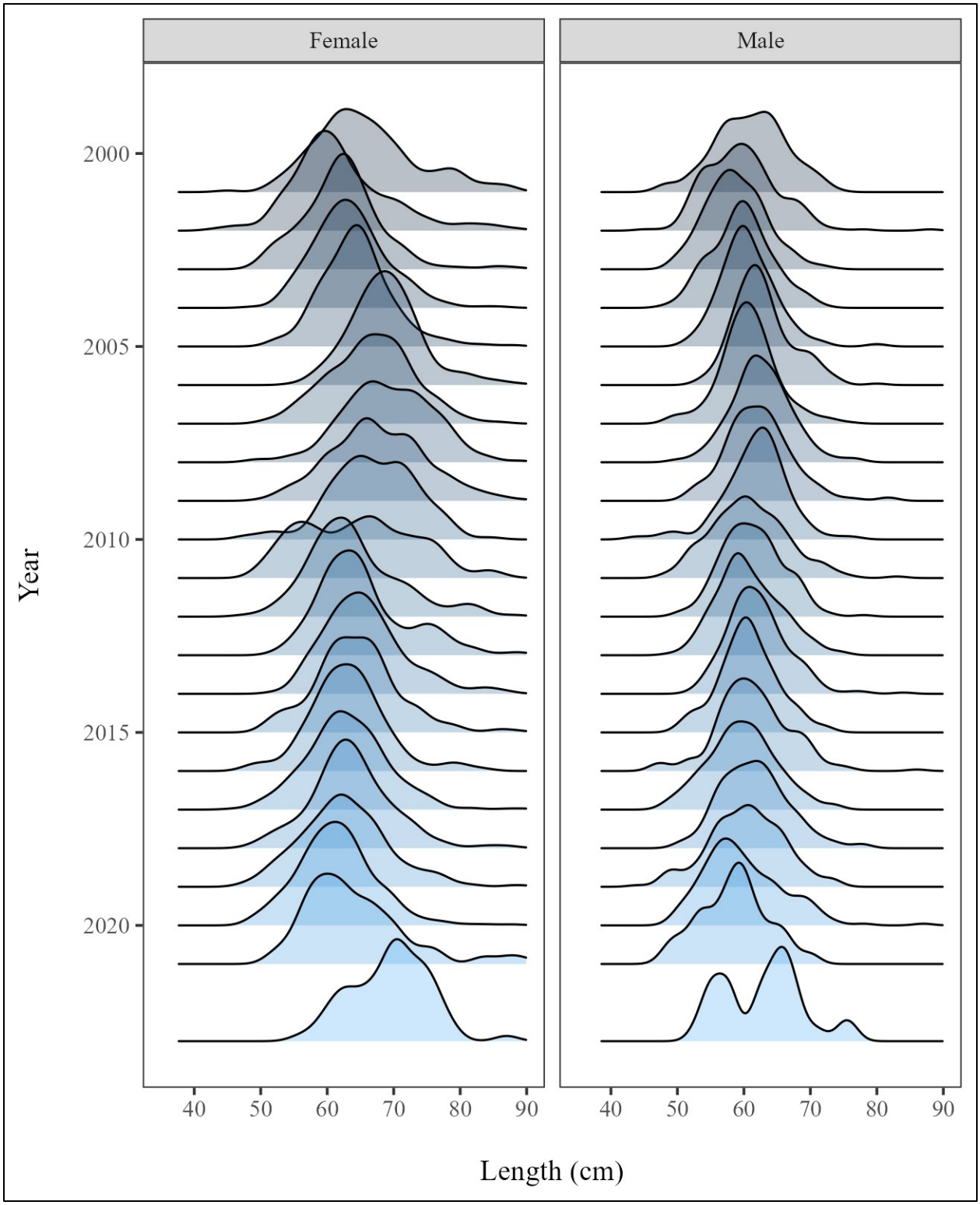

Figure 6.–Southern Southeast Inside Subdistrict (SSEI) sablefish longline fishery length distributions by sex from 2001–2023. No longline samples were collected in 2022 due to limited longline landings.

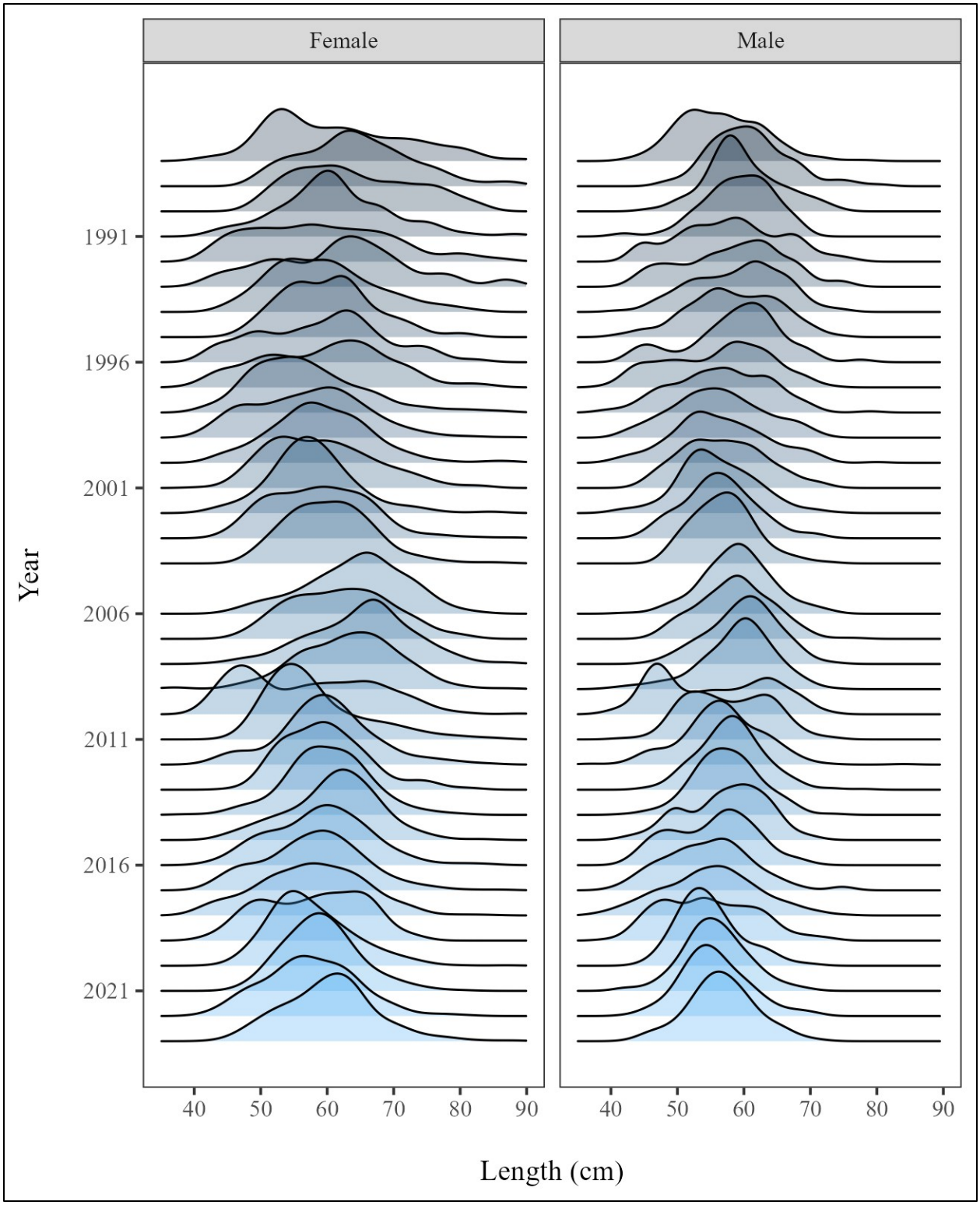

Figure 7.–Southern Southeast Inside Subdistrict (SSEI) sablefish longline survey length distributions by sex from 1988–2023, except 2005, when no survey occurred due to budget constraints.

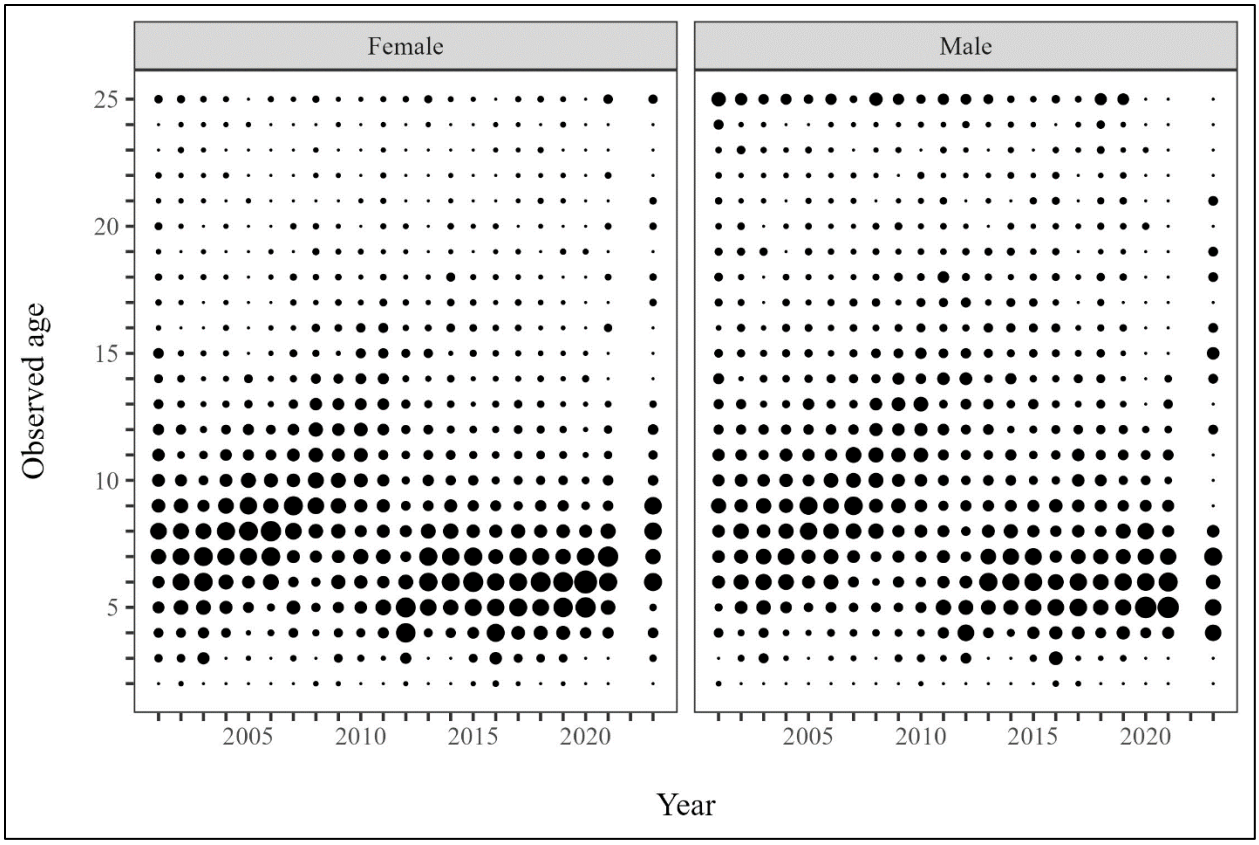

Figure 8.–Southern Southeast Inside Subdistrict (SSEI) longline fishery proportions-at-age by year and sex, 2001–2023.

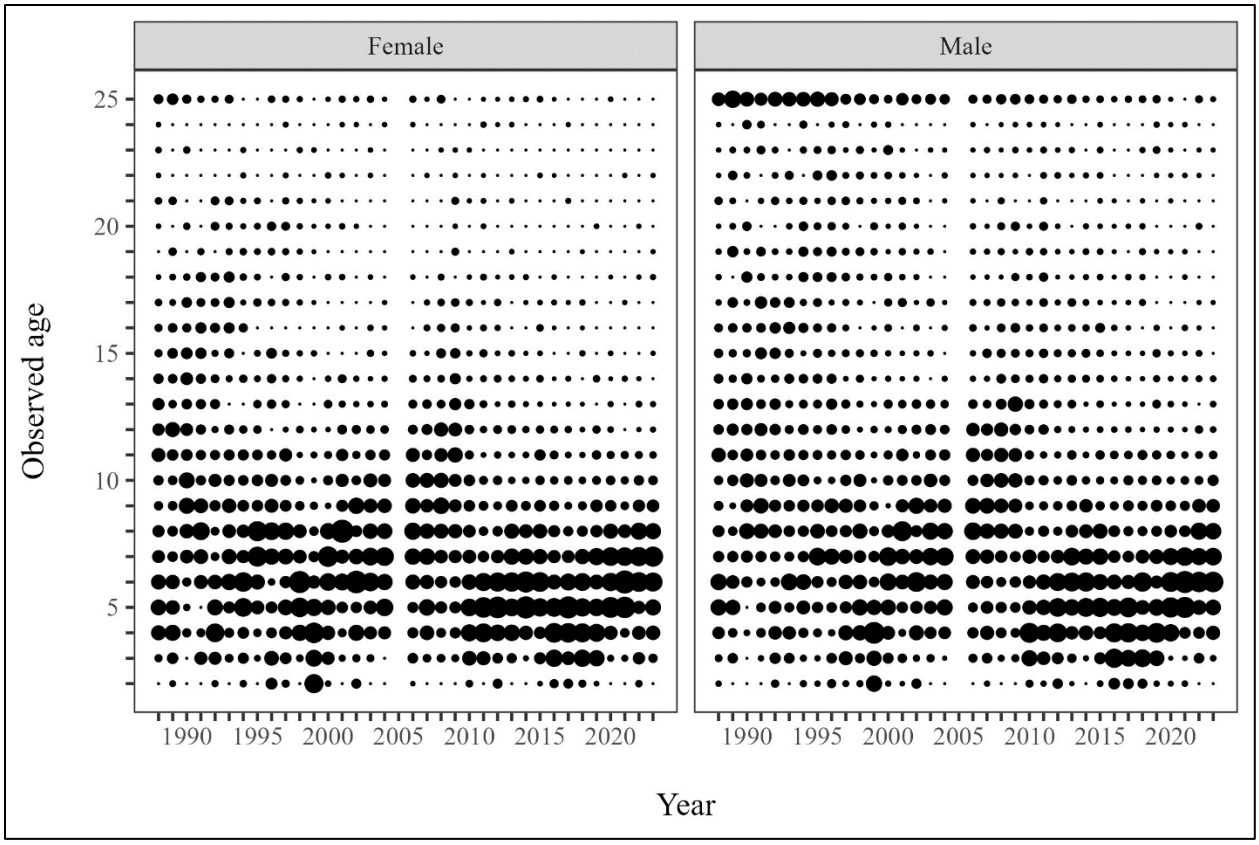

Figure 9.–Southern Southeast Inside Subdistrict (SSEI) longline survey proportions-at-age by year and sex, 1988–2023, except 2005, when no survey occurred due to budget constraints.