

Community & economic overview of Cook Inlet salmon fishing

Stakeholder working group
September 30, 2019



FISHERY IMPACT STATEMENT

MSA, § 303(A)(9)

FISHERY IMPACT STATEMENT (FMP)

Present Condition of the Fisheries

East Area Commercial Fishery

West Area Commercial Fishery

State of Alaska salmon management

W. Area EEZ Fisheries

Upper Cook Inlet

Bycatch Management

Sport Fisheries

Safety at Sea

Economic and Community Impacts of EEZ Harvests

Revenue

Employment

Residency

Taxes

Probable Future Condition and Potential Revenues

Community Fisheries Engagement Indices

FISHERY IMPACT STATEMENT

MSA, § 303(A)(9)

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Community Fisheries Engagement Indices

General notes

- Inflation adjusted values
- All available years were used for a particular analysis
- 1989 – Exxon Valdez Oil Spill

National Standard 8 – characterize engagement and reliance on this fishery (give the Council context).

First some metrics, then some tools

“Engagement” - how many participants?

“Reliance” – relative to other fishing and non-fishing economic opportunities

Example - Seattle versus Homer

STOCK ASSESSMENT & FISHERY EVALUATION (SAFE) REPORT

STOCK ASSESSMENT AND FISHERY EVALUATION REPORT FOR THE
GROUND FISH FISHERIES OF THE GULF OF ALASKA AND BERING
SEA/ALEUTIAN ISLANDS AREA:

ECONOMIC STATUS OF THE GROUND FISH FISHERIES OFF ALASKA, 2017

(385 pages)

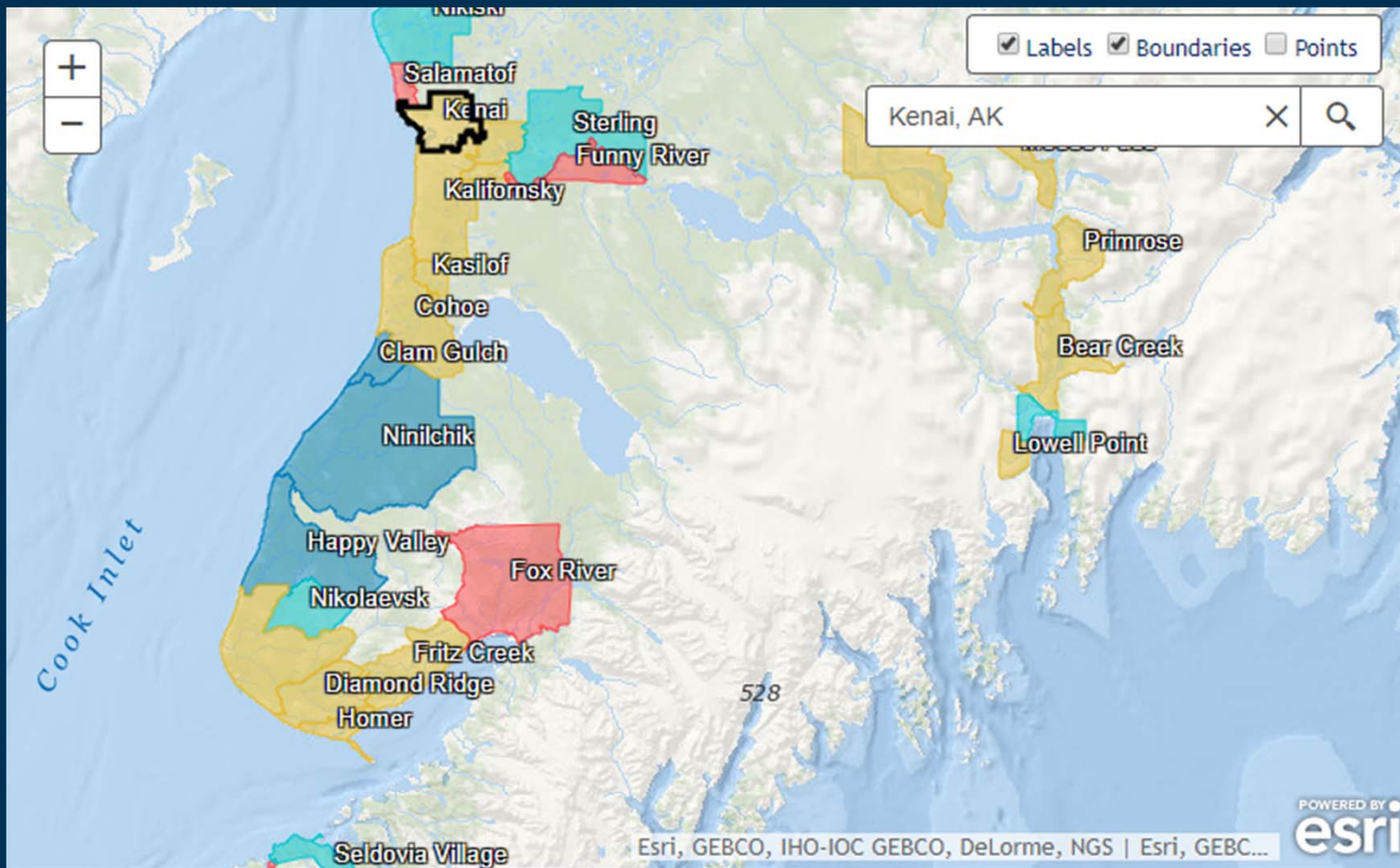
COMMUNITY VULNERABILITY

Social

Gentrification

**Engagement and
Reliance**

[www.st.nmfs.noaa.gov/humandimensions/social-
indicators/map](http://www.st.nmfs.noaa.gov/humandimensions/social-indicators/map)



Social Vulnerability

- Labor Force Low
- Housing Characteristics MedHigh
- Poverty Low
- Population Composition Low
- Personal Disruption Medium

Gentrification Pressure

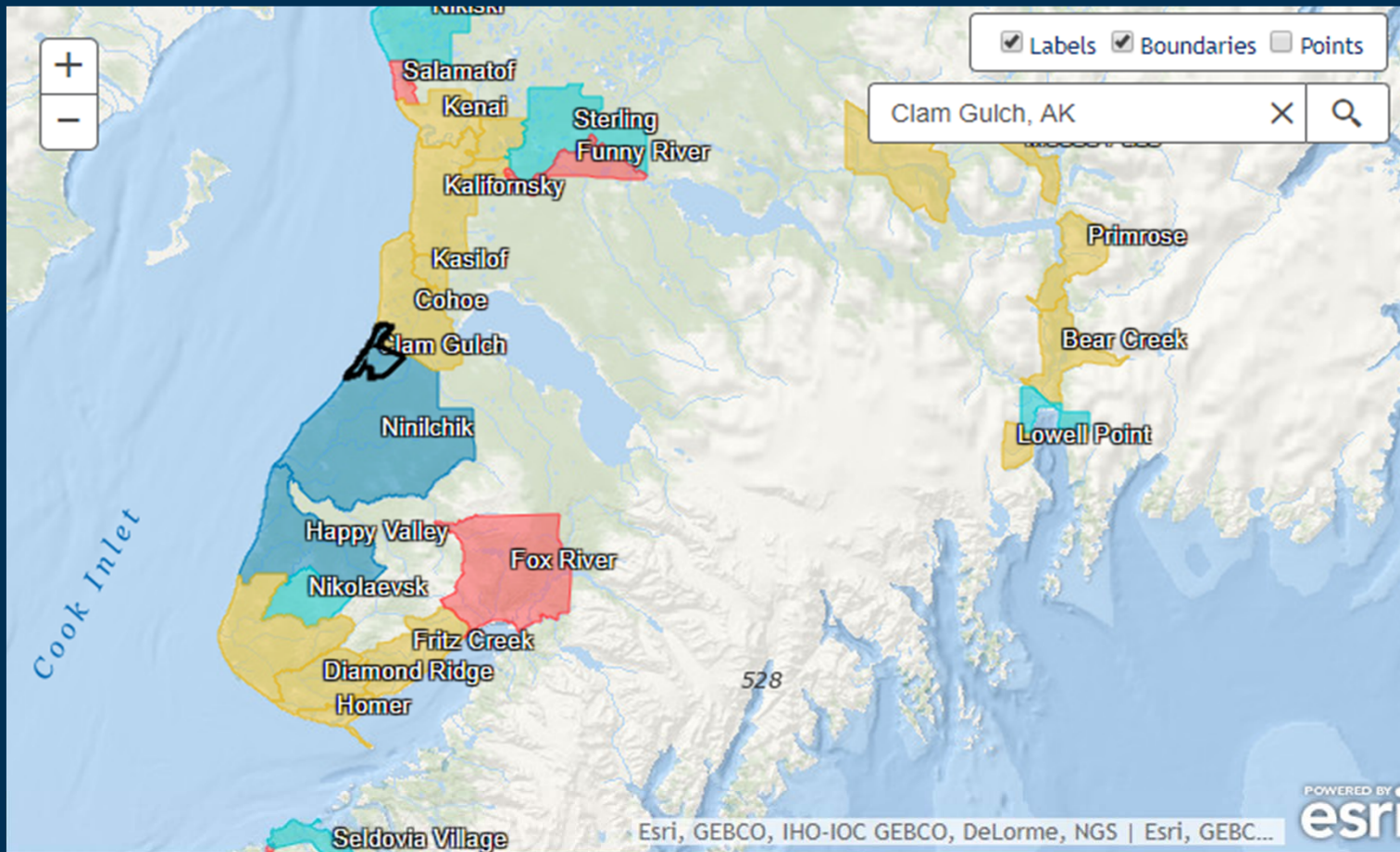
- Housing Disruption Low
- Retiree Migration N/A
- Urban Sprawl N/A

Sea Level Rise Vulnerability

- Inundation Risk N/A

Fishing Engagement and Reliance

- Commercial Fishing Engagement High
- Commercial Fishing Reliance Medium
- Recreational Fishing Engagement High
- Recreational Fishing Reliance Medium



Social Vulnerability

- Labor Force MedHigh
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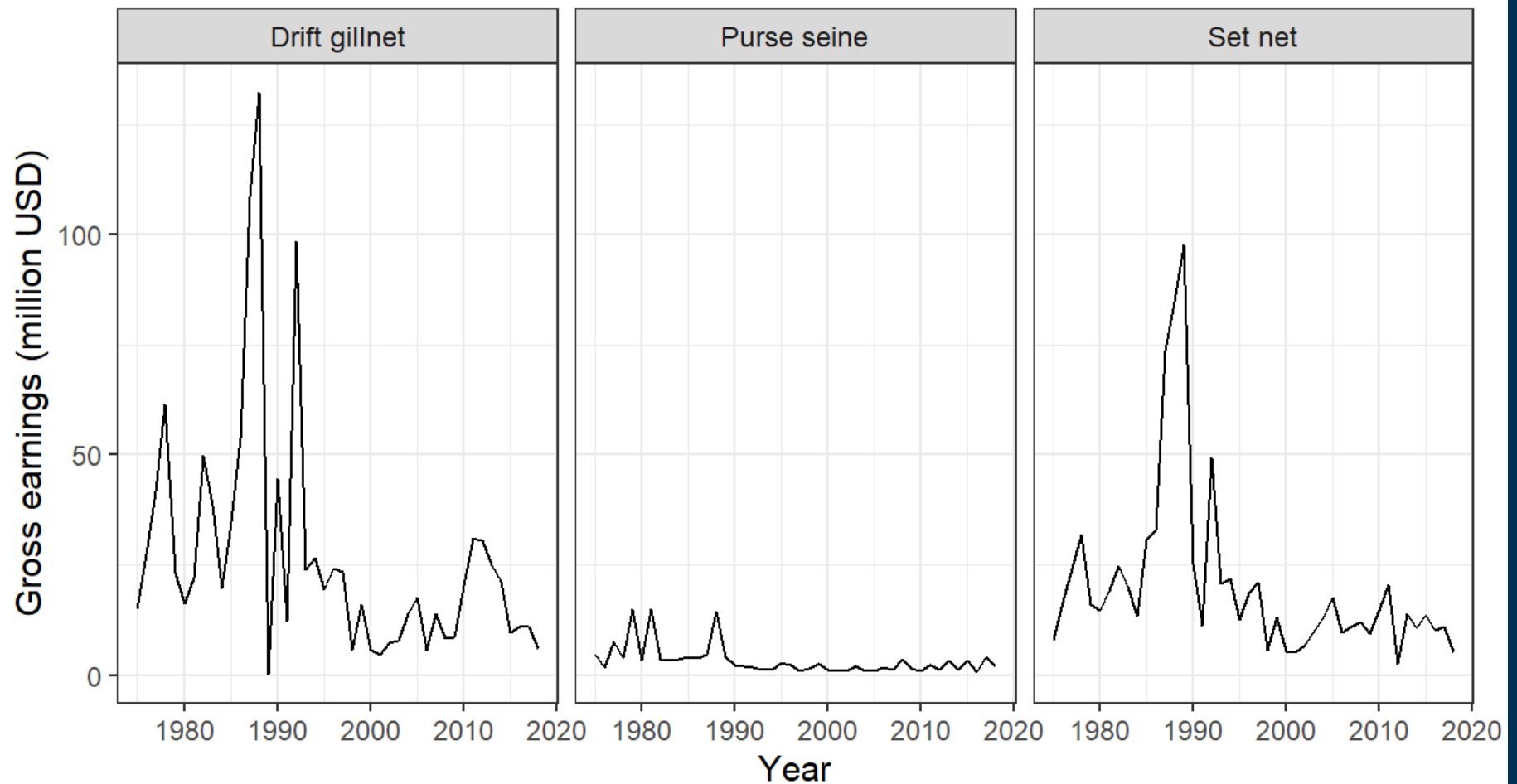


Figure AA. Total annual earnings (inflation adjusted) for the drift gillnet (S03H), purse seine (S01H), and set net (S04H) fleets in Cook Inlet from 1975 - 2018.

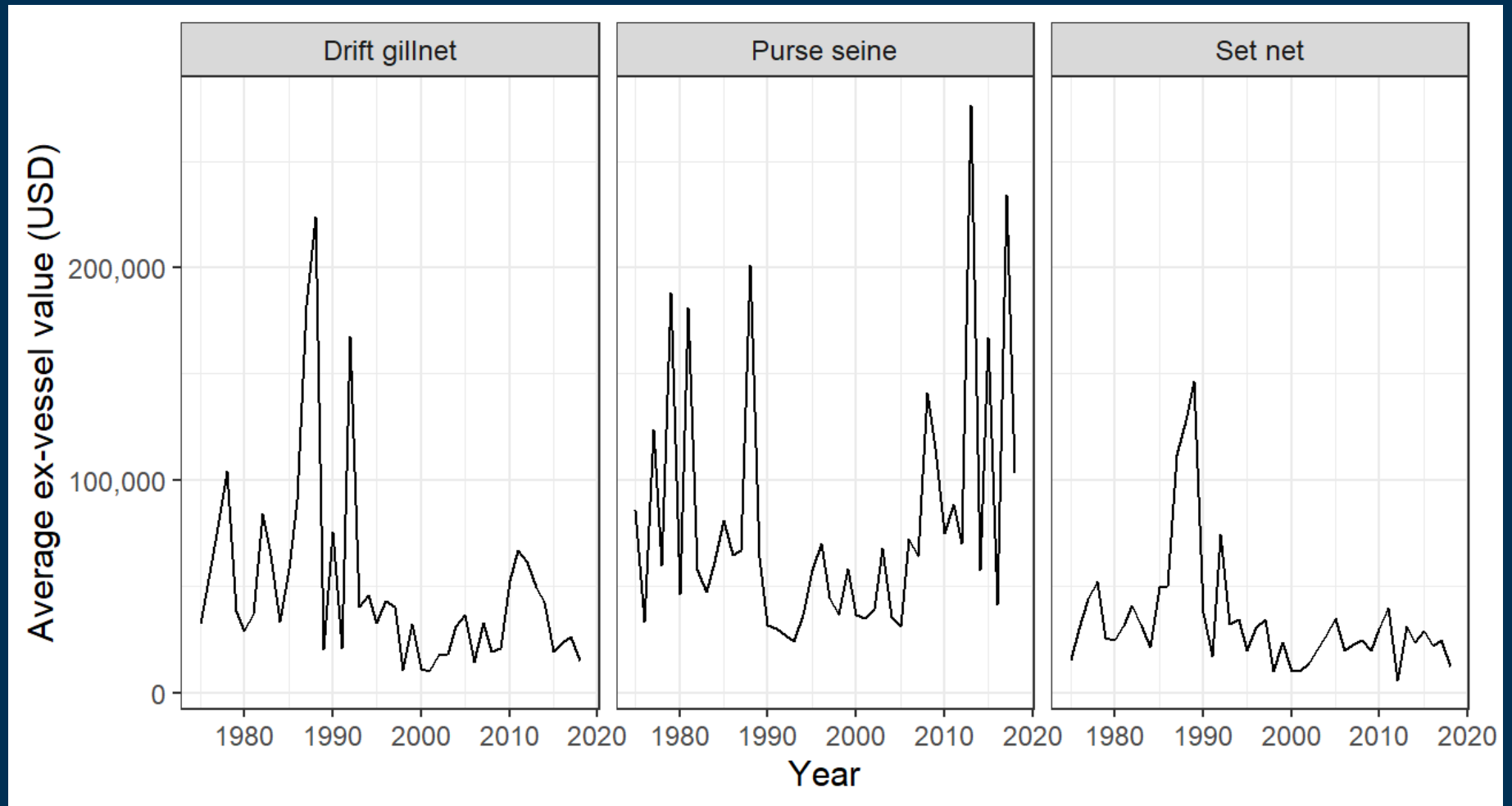
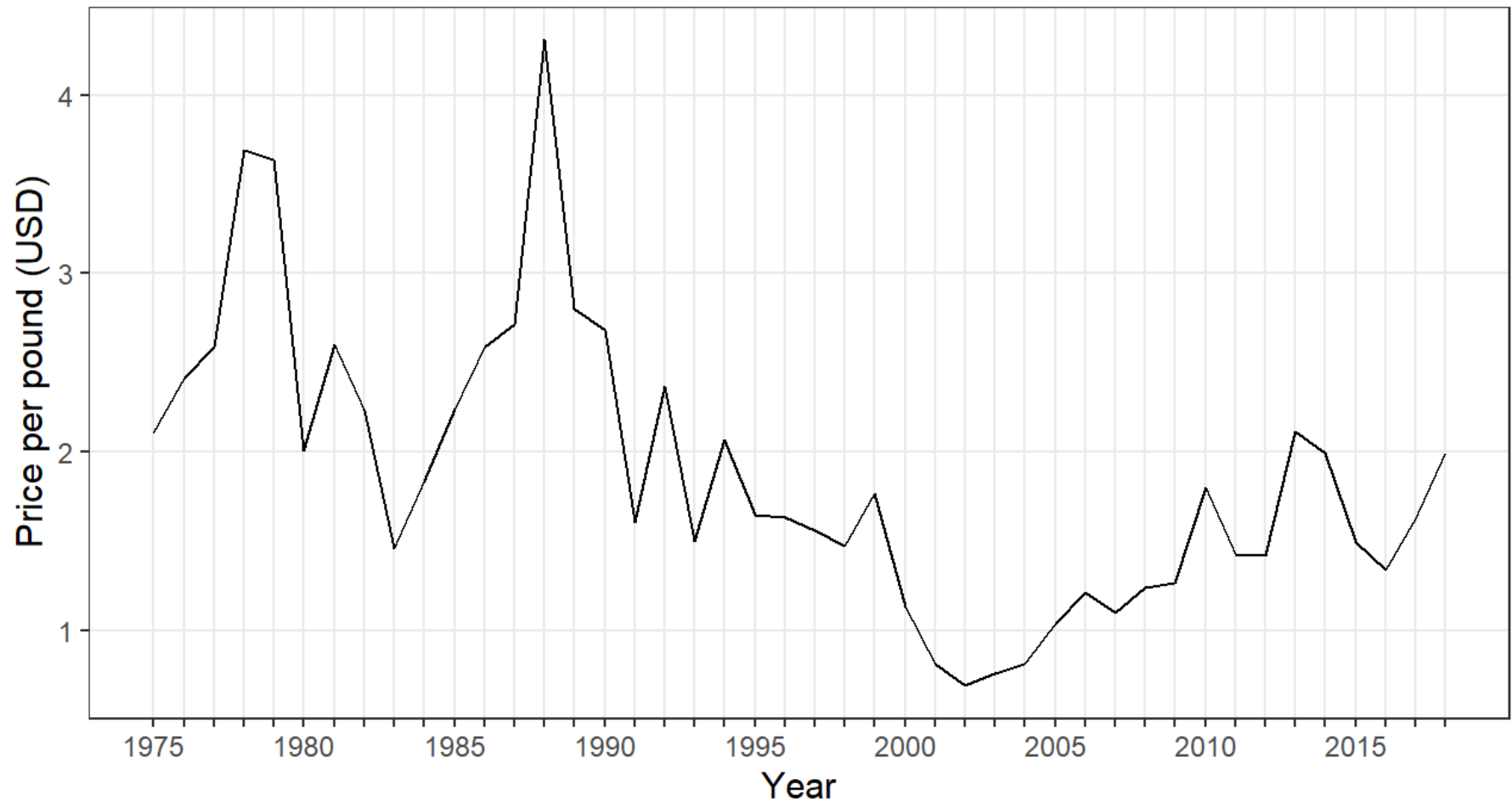


Figure BB. Average annual earnings per permit holder (referred to as ex-vessel, as it is typically calculated) for the drift gillnet (S03H), purse seine (S01H), and set net (S04H) fleets in Cook Inlet, 1975 - 2018.



Average sockeye price paid for per year (not in document)

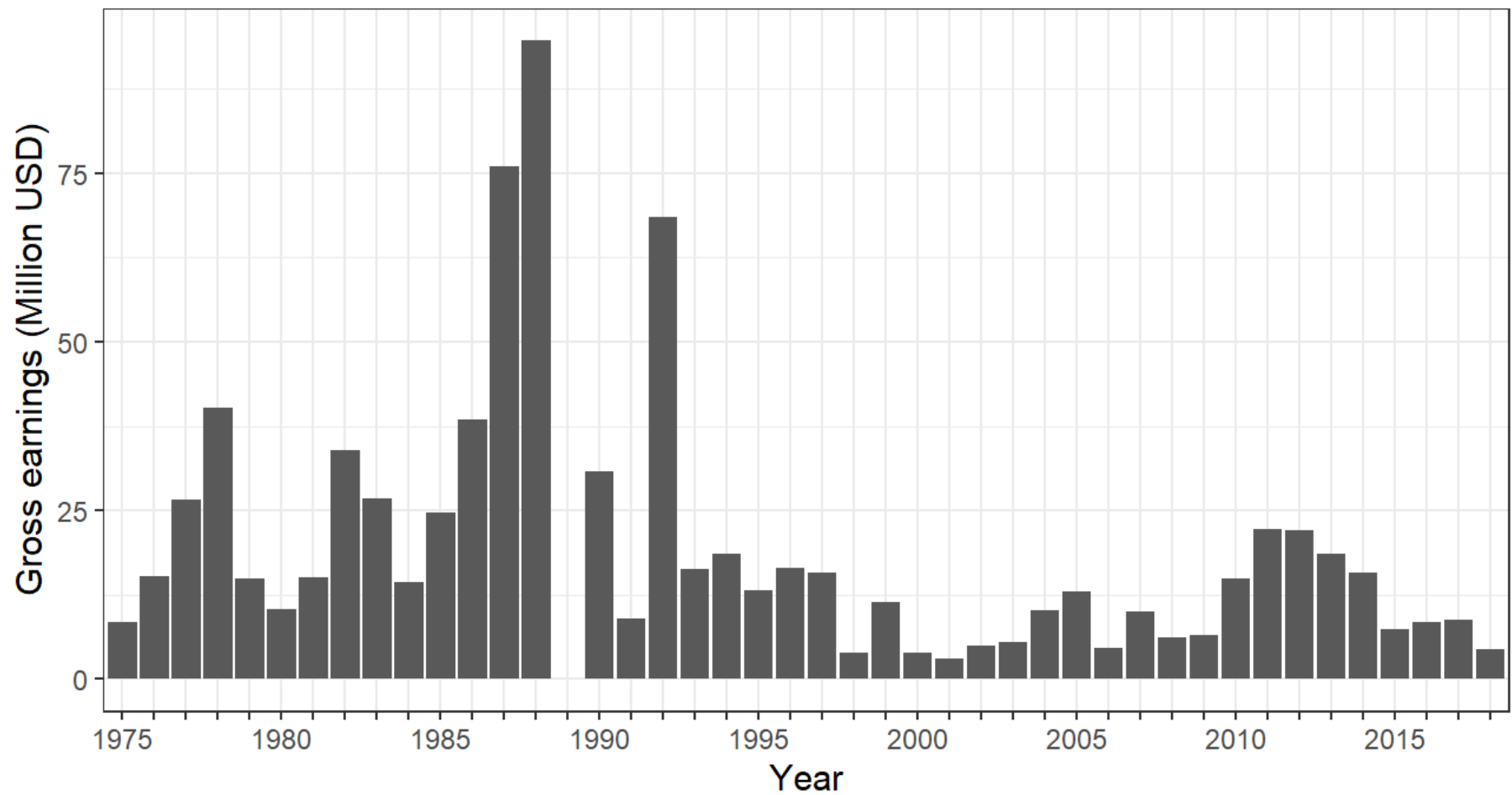


Figure II. Total gross annual earnings for Cook Inlet drift gillnet permits held by Alaskan residents from 1975-2018.

Upper Cook Inlet Management Area Central District Statistical Areas

Kustatan Subdistrict

- 245-60, West Foreland
- 245-55, Big River

Western Subdistrict

- 245-50, Little Jack Slough
- 245-40, Polly Creek
- 245-30, Tuxedni Bay
- 245-20, Silver Salmon

Lower Subdistrict

- 245-10, Chinitna Bay

*Note the different boundaries for Set and Drift Gillnet

Kalgin Island Subdistrict

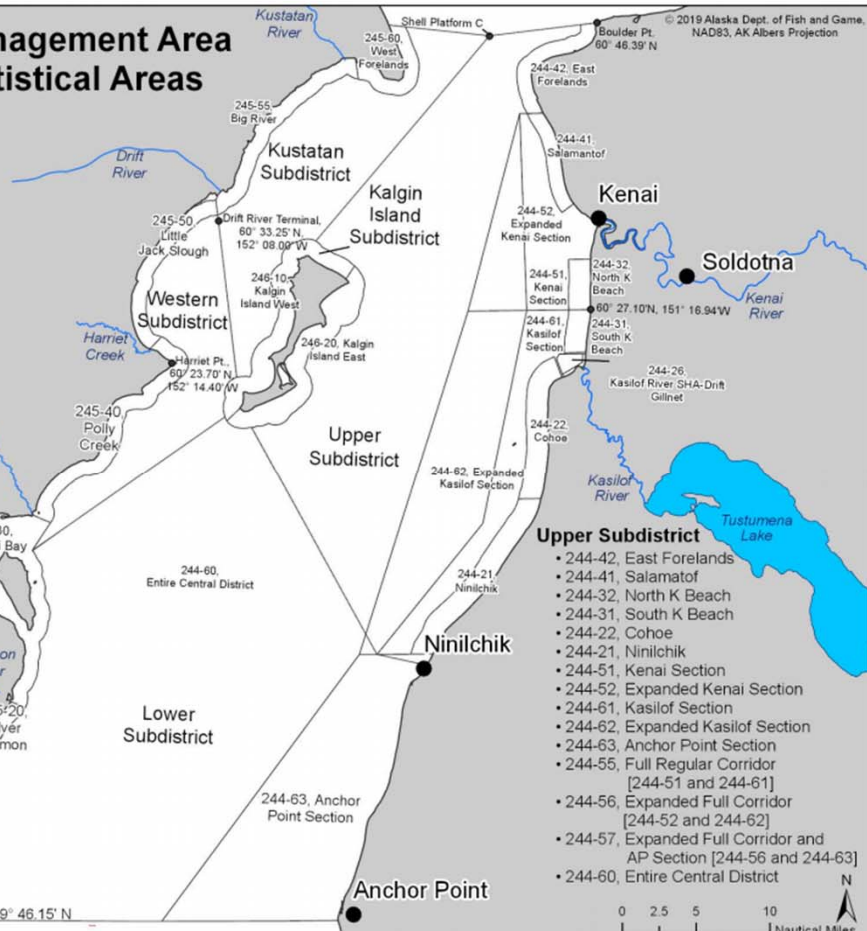
- 246-10, West Side
- 246-20, East Side

• Note: not all points displayed are currently defined in regulation; they are shown here for reference purposes only.

Chinitna Bay Subdistrict

- 245-10, Chinitna Bay

Not to be used for navigational purposes.

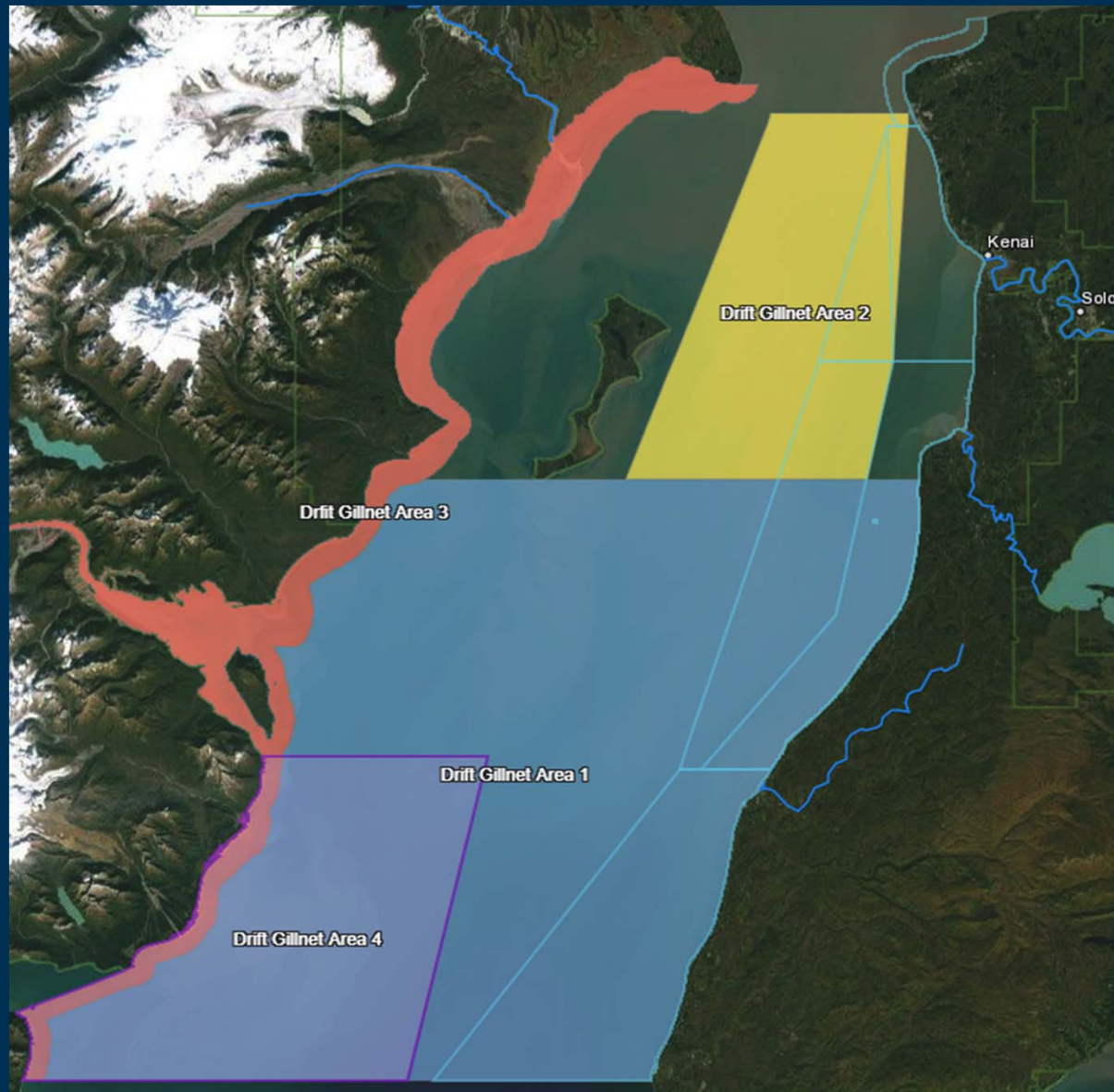


Upper Subdistrict

- 244-42, East Forelands
- 244-41, Salamatof
- 244-32, North K Beach
- 244-31, South K Beach
- 244-22, Cohoe
- 244-21, Ninilchik
- 244-51, Kenai Section
- 244-52, Expanded Kenai Section
- 244-61, Kaslof Section
- 244-62, Expanded Kaslof Section
- 244-63, Anchor Point Section
- 244-55, Full Regular Corridor [244-51 and 244-61]
- 244-56, Expanded Full Corridor [244-52 and 244-62]
- 244-57, Expanded Full Corridor and AP Section [244-56 and 244-63]
- 244-60, Entire Central District

EEZ HARVEST

EEZ HARVEST



Drift Gillnet sockeye salmon harvest by stat area, 2007-2016

No. Fish	Stat Area	Locale Code	State	EEZ
1,863	24426	01	1,863	
62,930	24426		62,930	
186,211	24455		186,211	
4,032	24456	01	1,008	3,024
2,168,240	24456		2,168,240	
206	24457	01	52	155
1,112,440	24457		1,112,440	
7,337,740	24460	01	1,834,435	5,503,305
8,645	24460	04	6,484	2,161
831,730	24460	05	415,865	415,865
5,016,262	24460	DW	2,508,131	2,508,131
200,236	24461		200,236	
12	24510	04	12	
817	24510		817	
Totals =			8,498,723	8,429,462
			50%	50%

Locale Code	Place Name	Area
1	Drift Area 1	244-60
2	Drift Area 2	244-60
3	Drift Area 3	244-60
4	Drift Area 3 & 4	244-60
5	Drift Area 1 & 2	244-60

Explanation of Major Harvest Assumptions

- District Wide harvest is 50/50 State vs. EEZ
- Drift Area 1 harvest is 25/75 State vs. EEZ
- Drift Area 1/2 harvest is 50/50 State vs. EEZ
- Drift Area 3/4 harvest is 75/25 State vs. EEZ

EEZ HARVEST

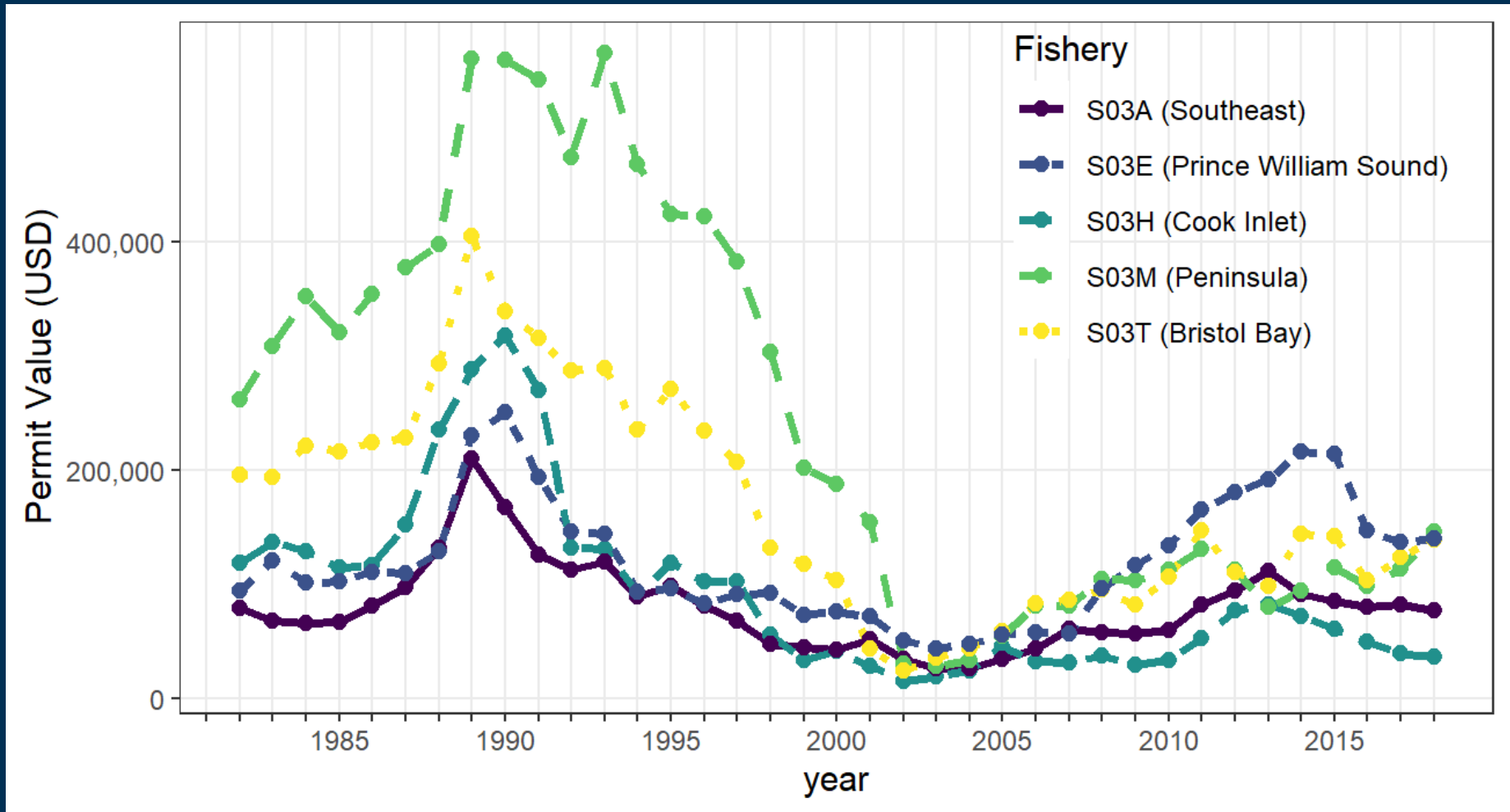


Figure EE. Value of gillnet permits for Southeast, Prince William Sound, Cook Inlet, Alaska Peninsula, and Bristol Bay, 1982 through 2018 (Source CFE).

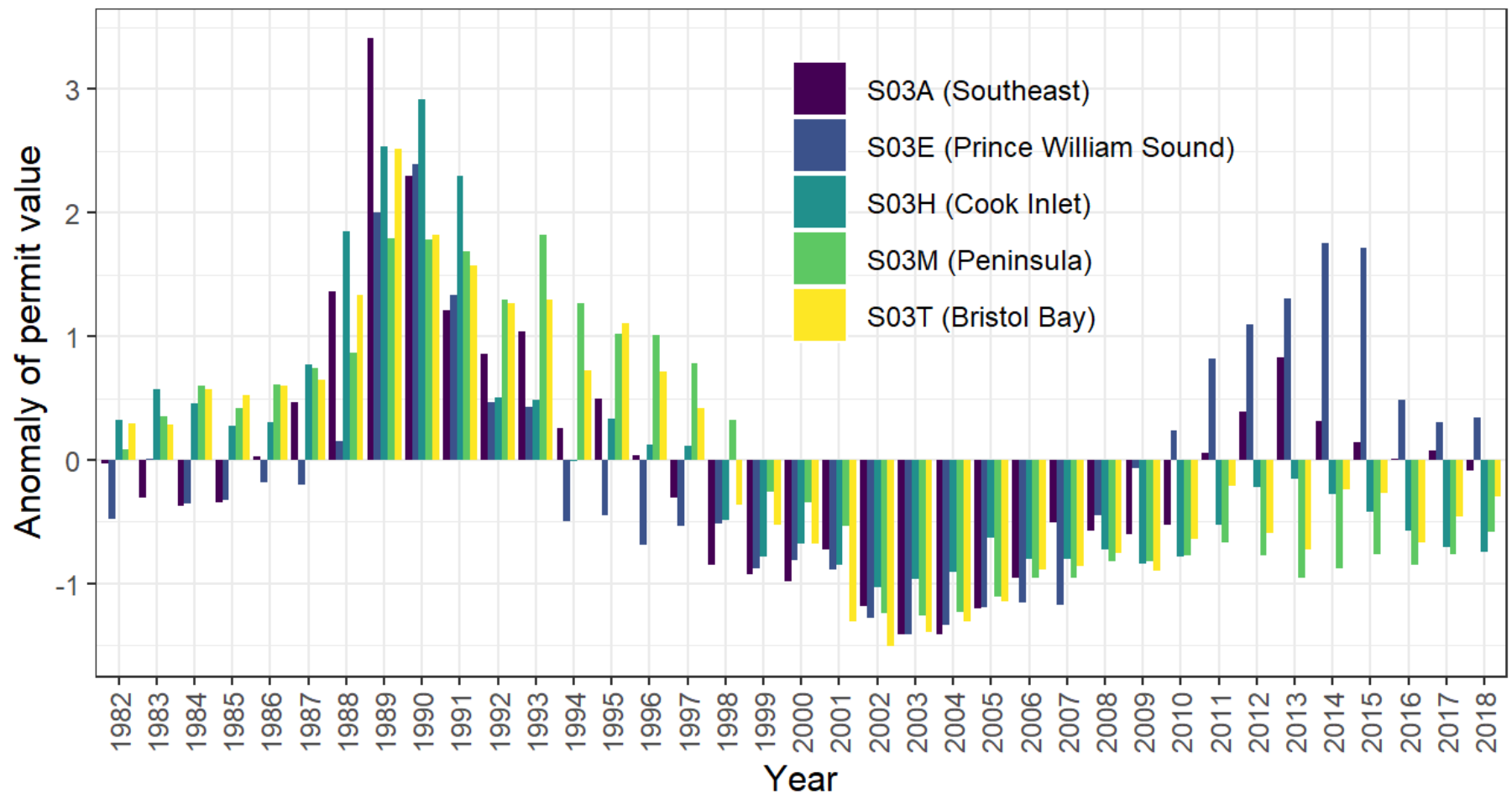
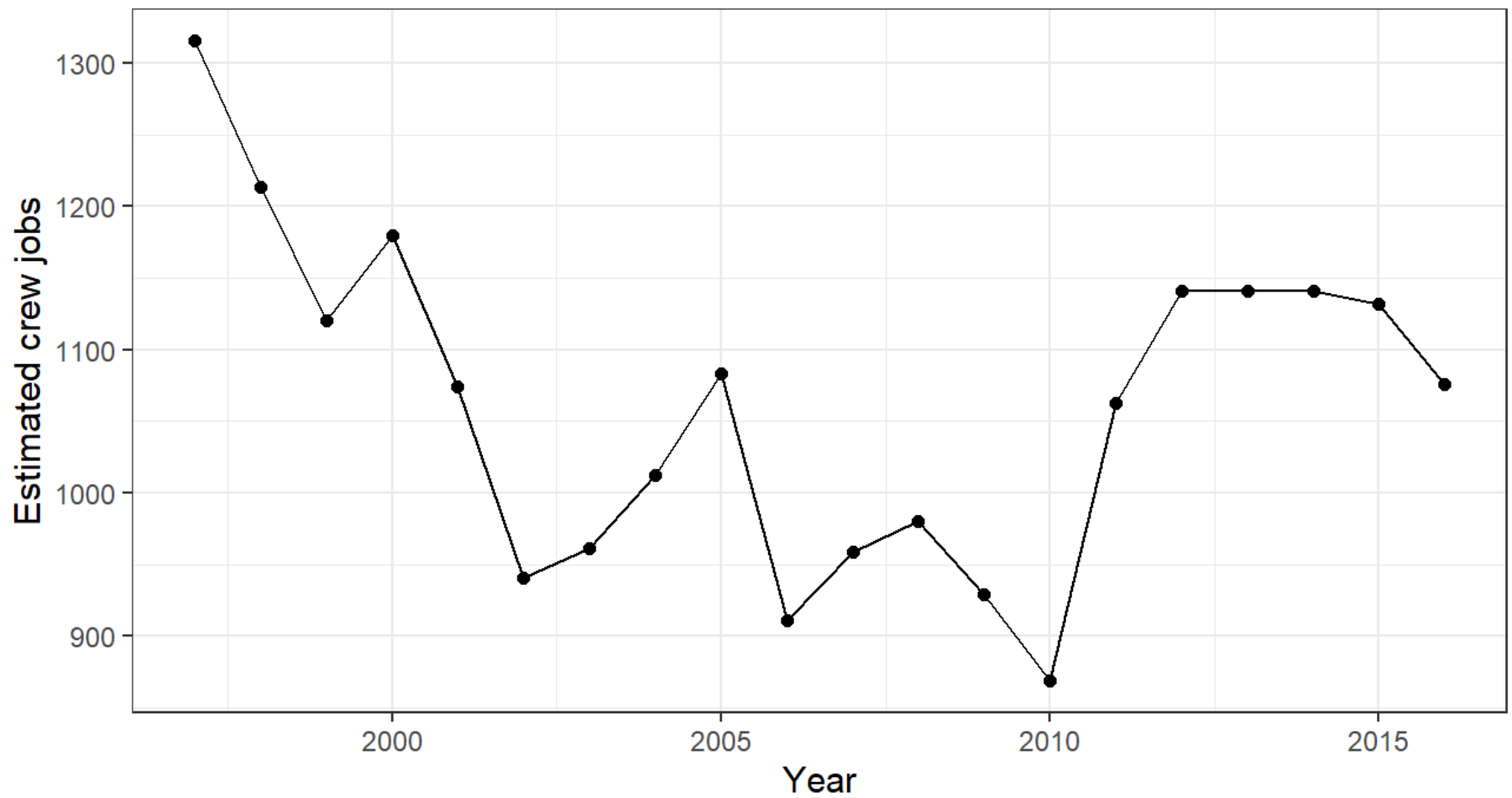


Figure FF. Permit value anomalies for gillnet fisheries. While permit values vary across fishery, this type of illustration facilitates a comparison of trends over time relative to the average for each fishery. Each color represents a fishery and bars illustrate how permit values for each fishery and year compare to the average permit value for that fishery over time. A bar at zero on the y-axis would represent the average. Bars below zero represent below average permit values. Bars above zero represent above average permit values. For example, in 2016, Cook Inlet, Peninsula, and Bristol Bay had permit values below their long term average, while Southeast permit values were above average, and PWS permits were average value.



Estimated number of crew jobs, 1997 – 2016, from Table I.4

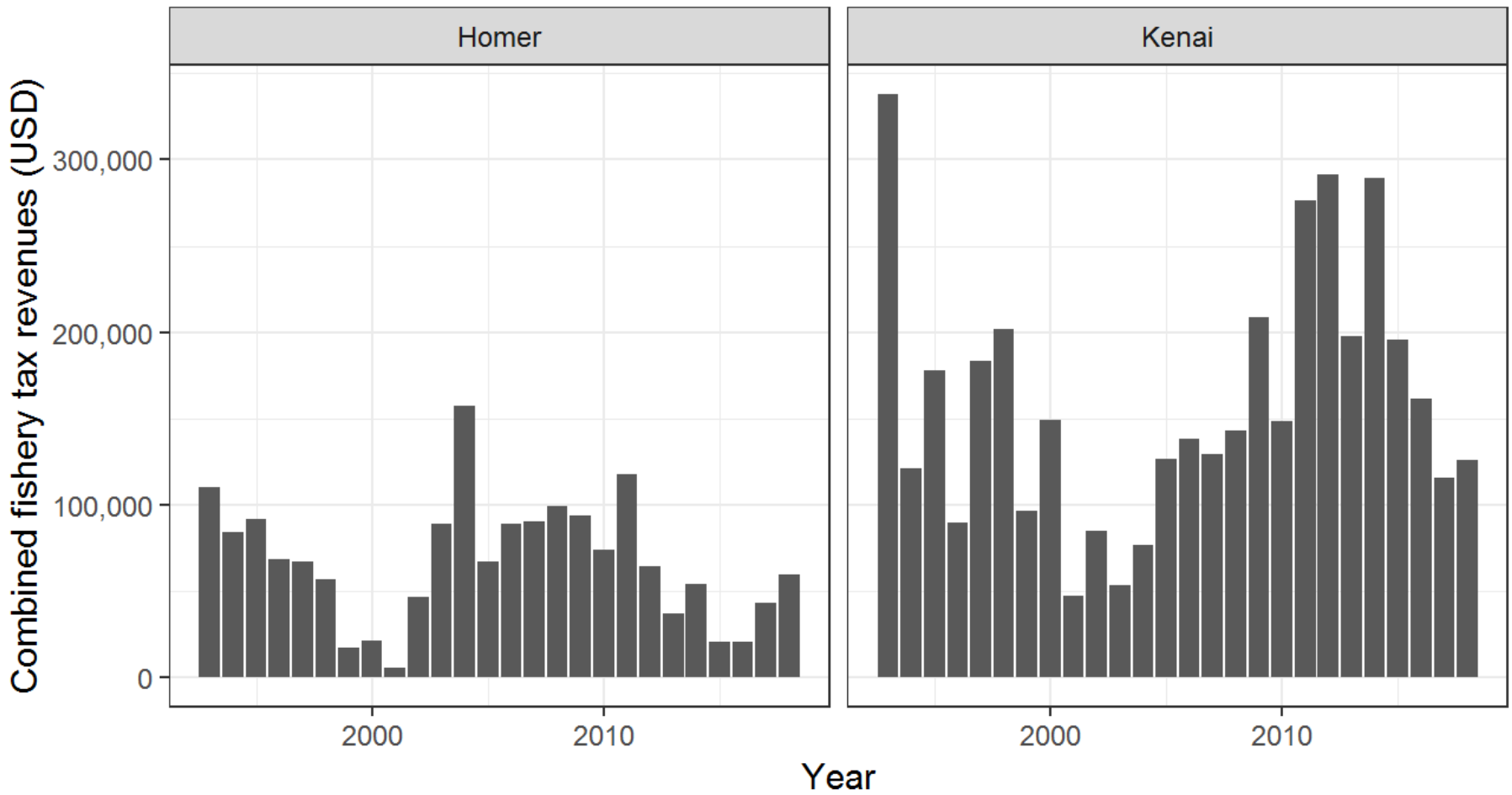


Figure GG. Combined tax revenues for Homer and Kenai. These revenues including landing and fishery business taxes and are inclusive of all species (i.e., salmon, halibut, etc.) landed.

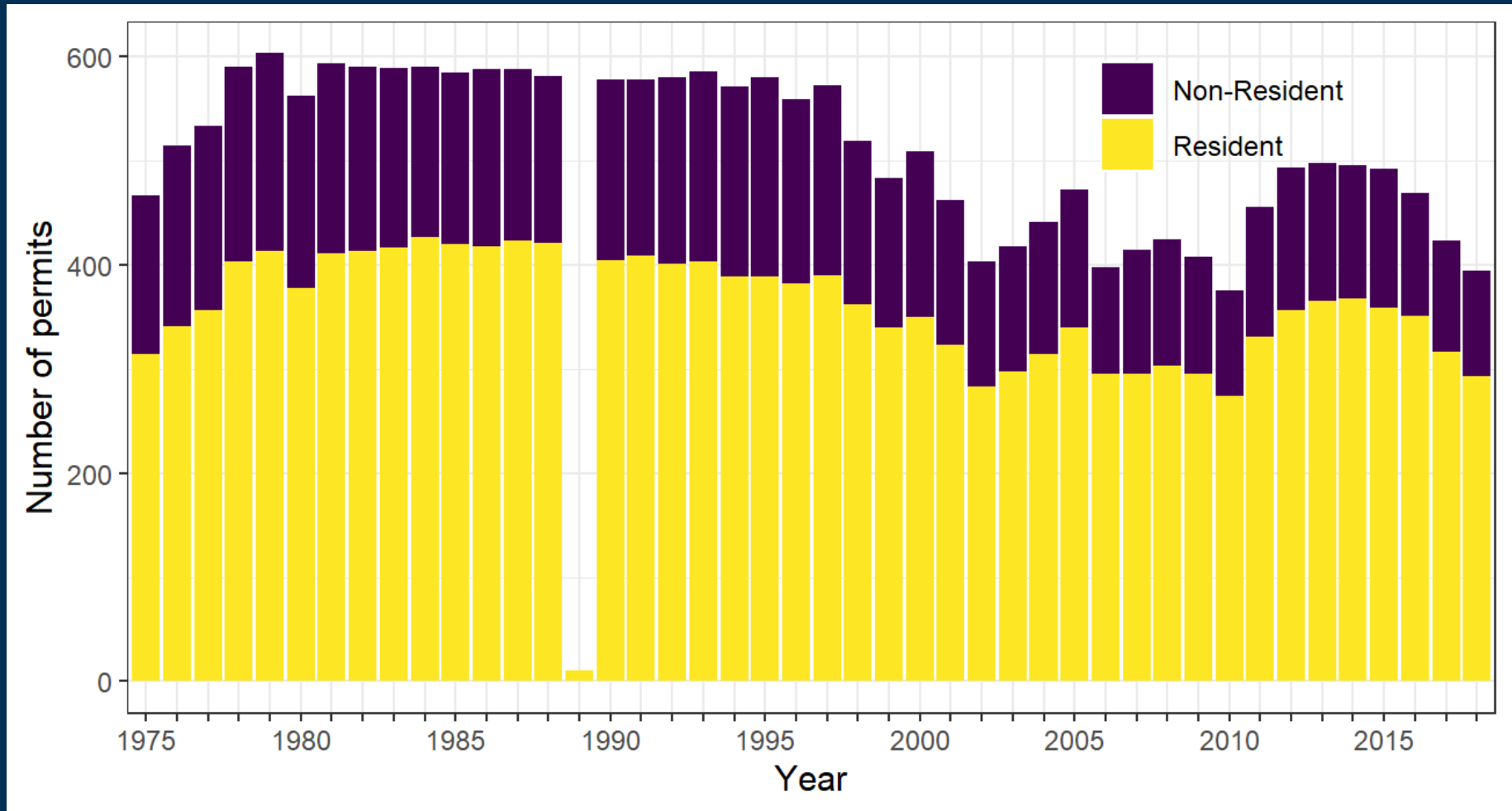


Figure HH. Proportional composition of active permits fished by AK and non-AK residents. The total height of bars equals the total number of permits fished in a year, while each of the colors represents the proportion of permits held by residents (yellow) and non-residents (purple). Missing data (1989 Exxon Valdez Oil Spill).

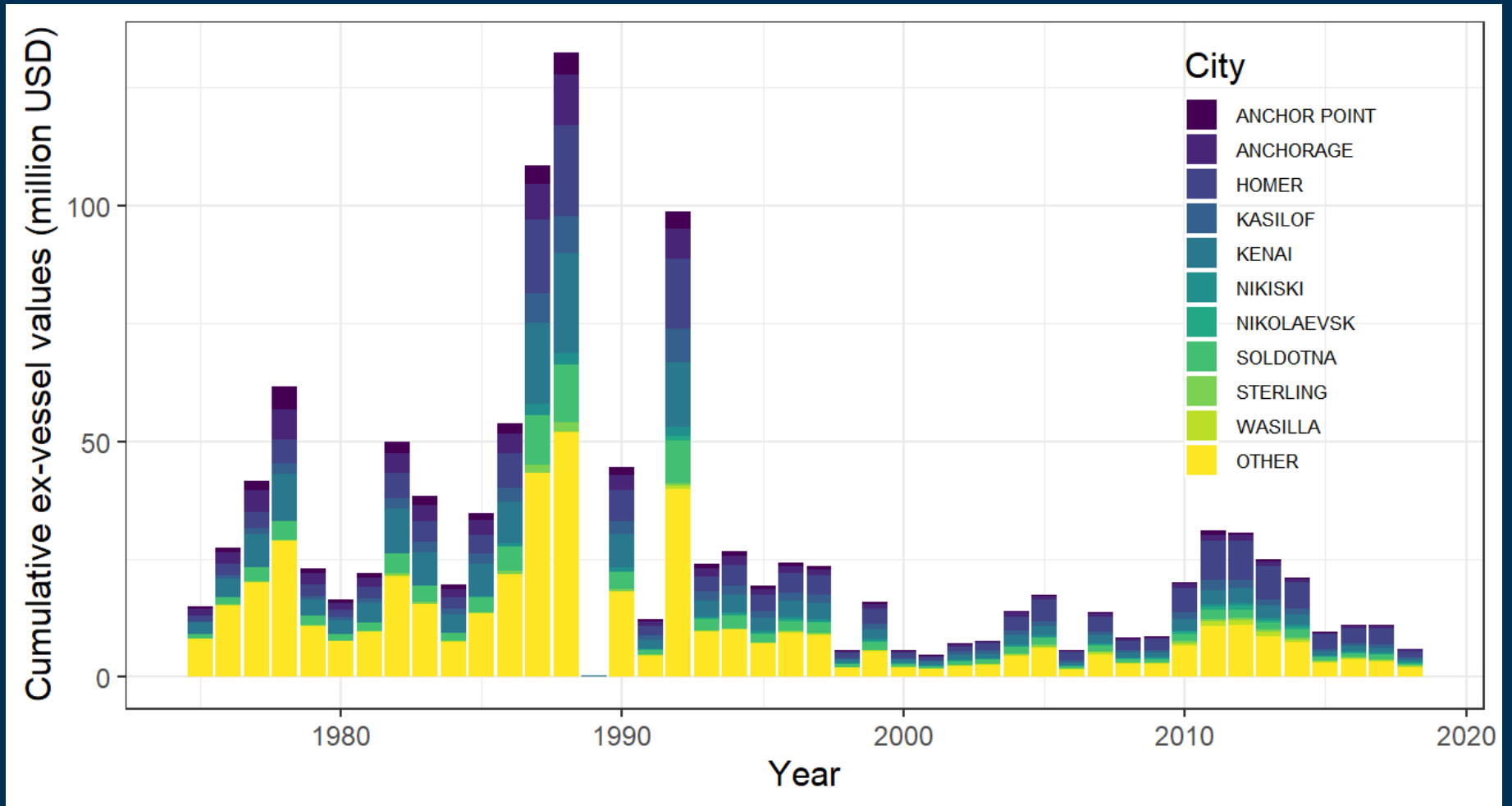


Figure GG. Cumulative ex-vessel revenues for the ten communities with the greatest number of S03H permit holders from 2013-2018. All other communities are combined into the “Other” category. Eight of the top ten earning communities are on the Kenai Peninsula.

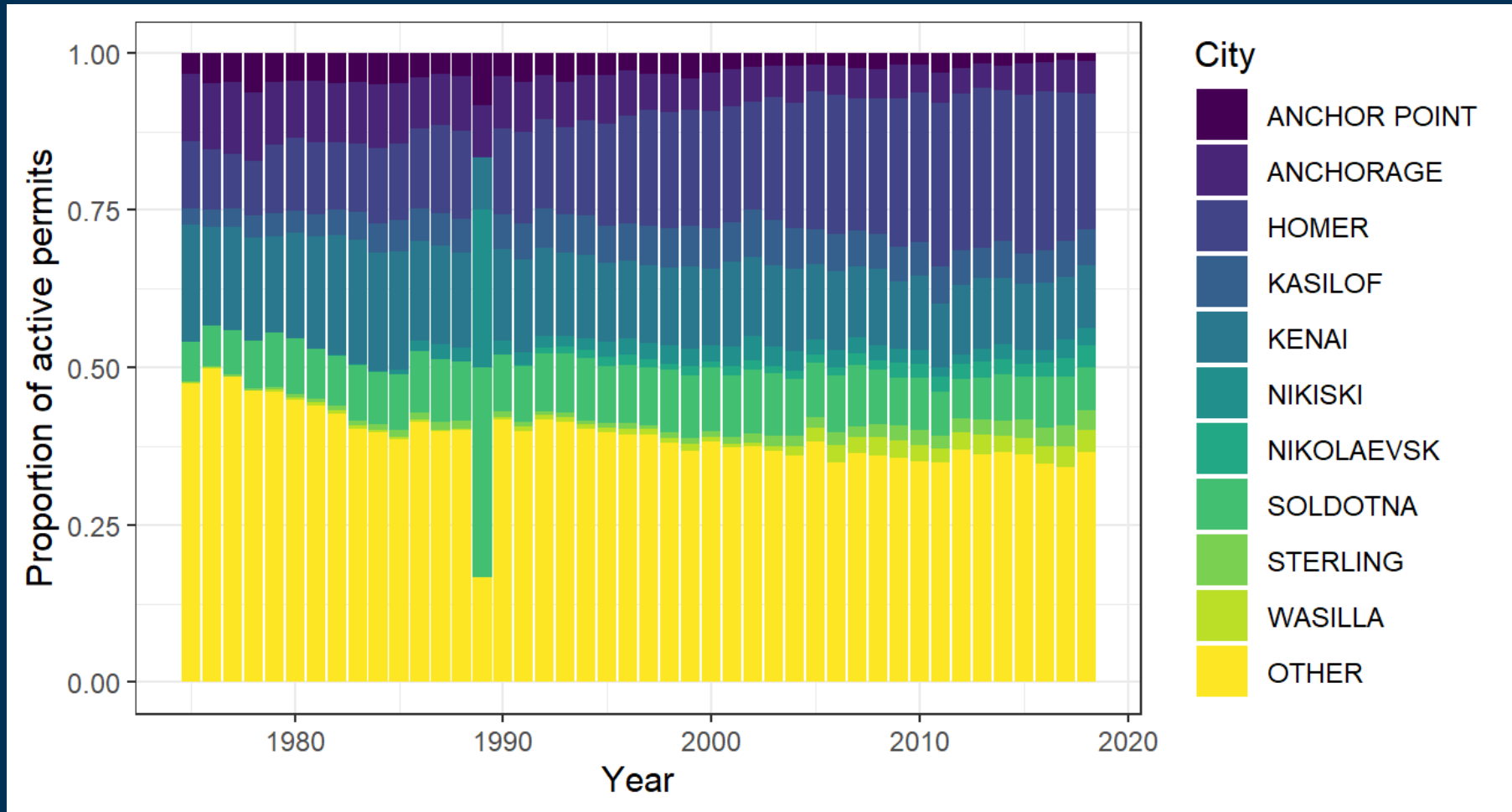


Figure HH. Proportion of permits fished in a given year by the community in which the permit is registered.

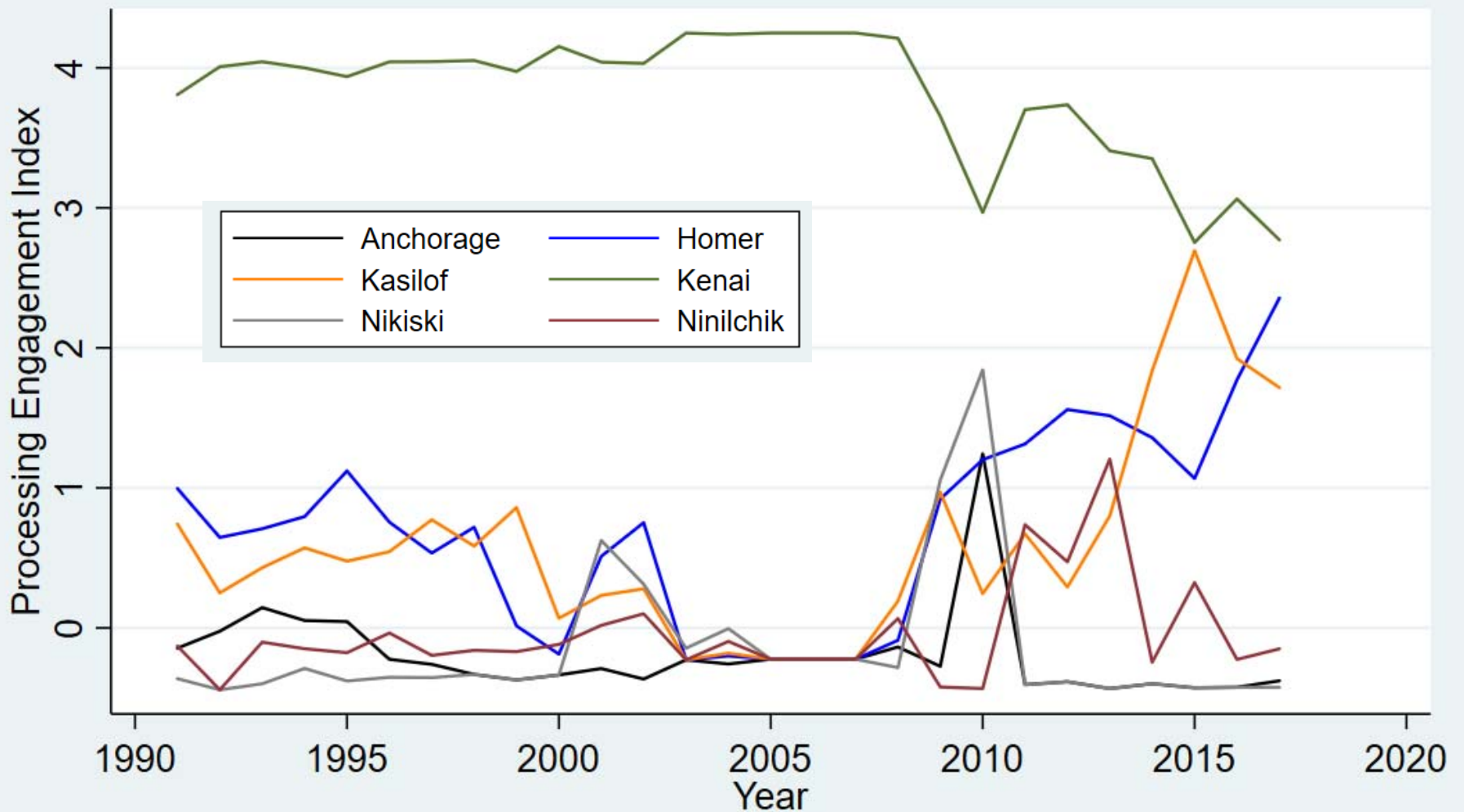


Figure II. Index scores of communities highly engaged in commercial Cook Inlet salmon drift gillnet processing for at least 1 year from 1991-2017.

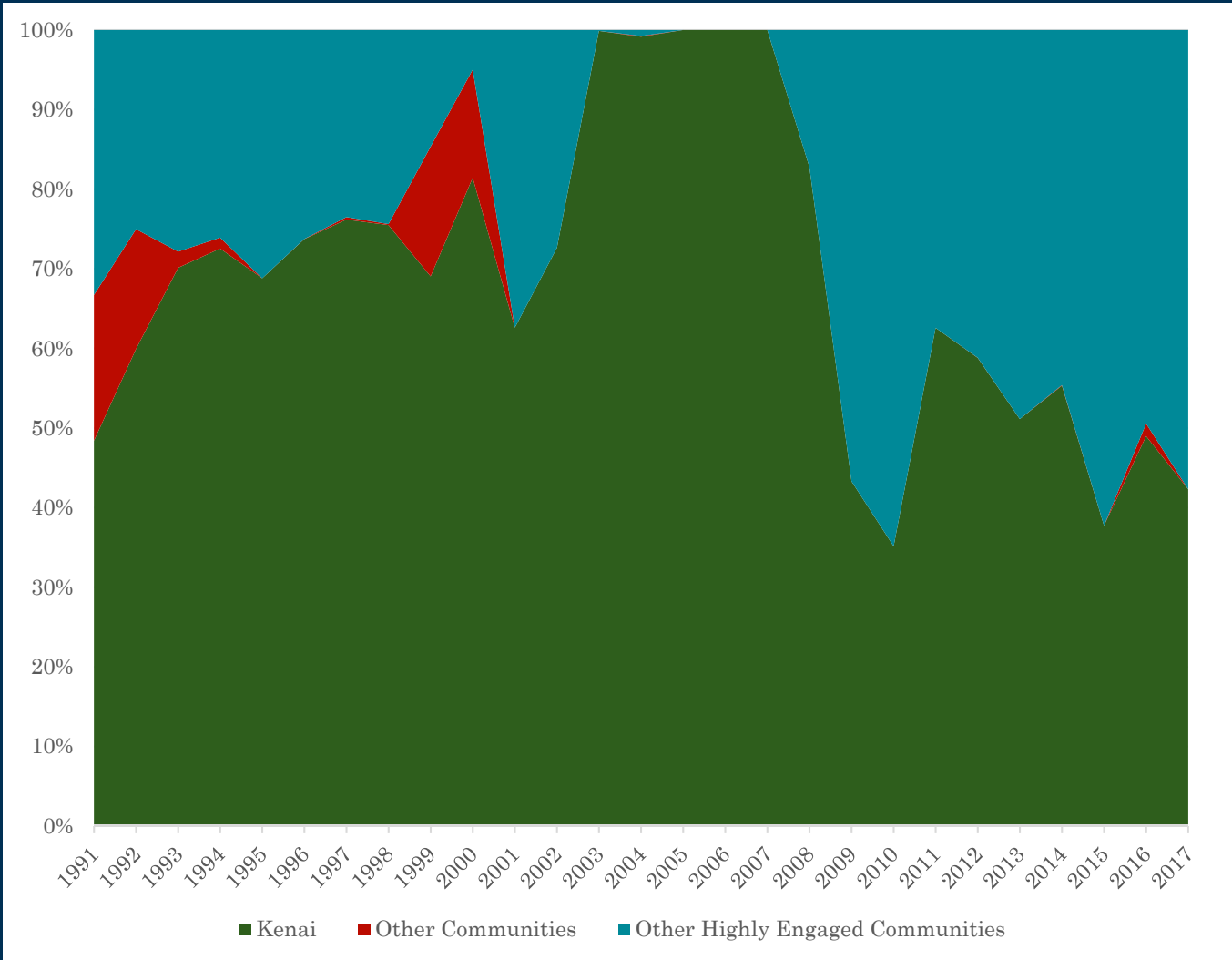


Figure Jj. Processing regional quotient of revenue for communities highly engaged in commercial Cook Inlet salmon drift gillnet processing for at least one year from 1991-2017.

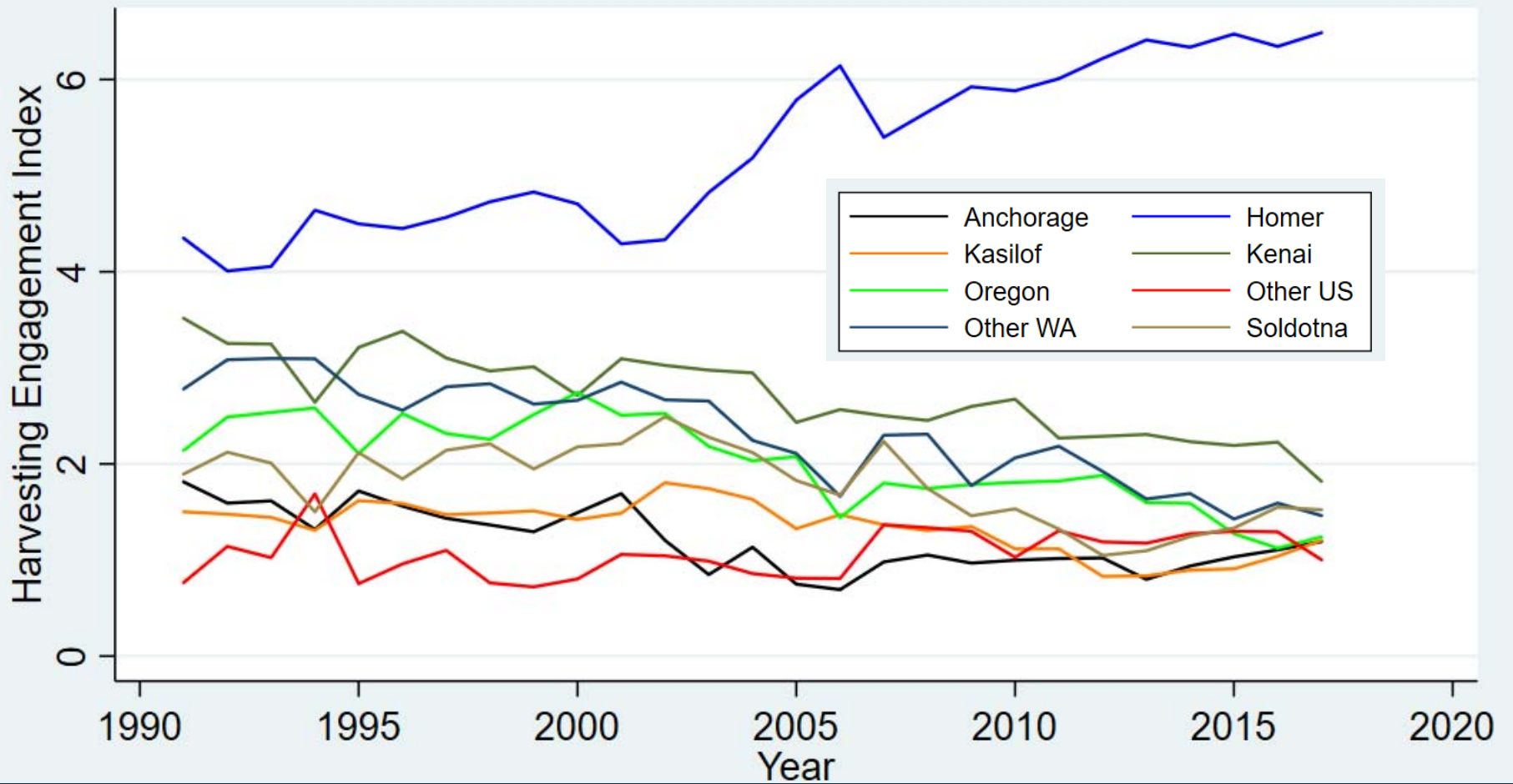


Figure KK. Index scores of communities highly engaged in commercial Cook Inlet salmon drift gillnet harvest for at least 1 year from 1991-2017.

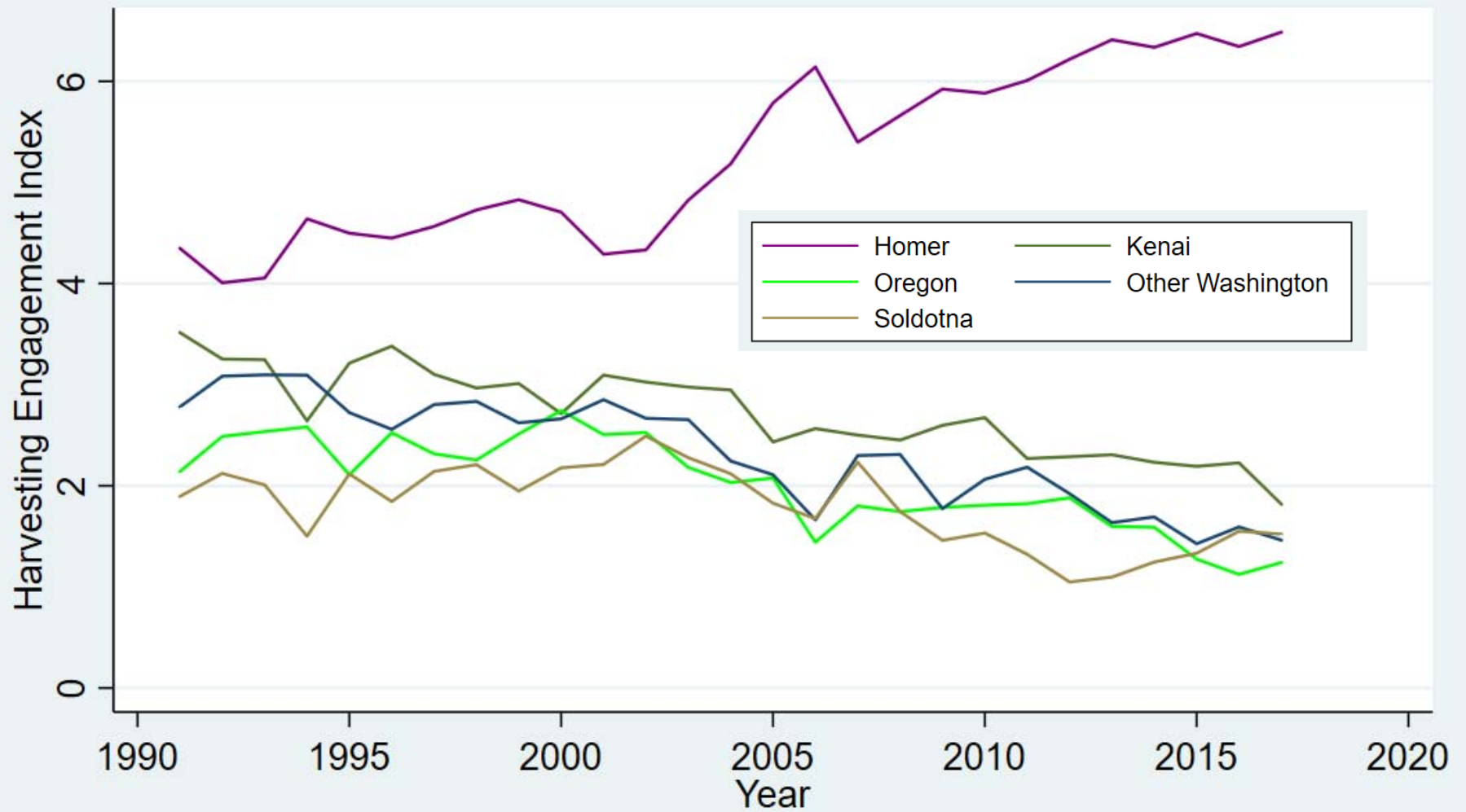


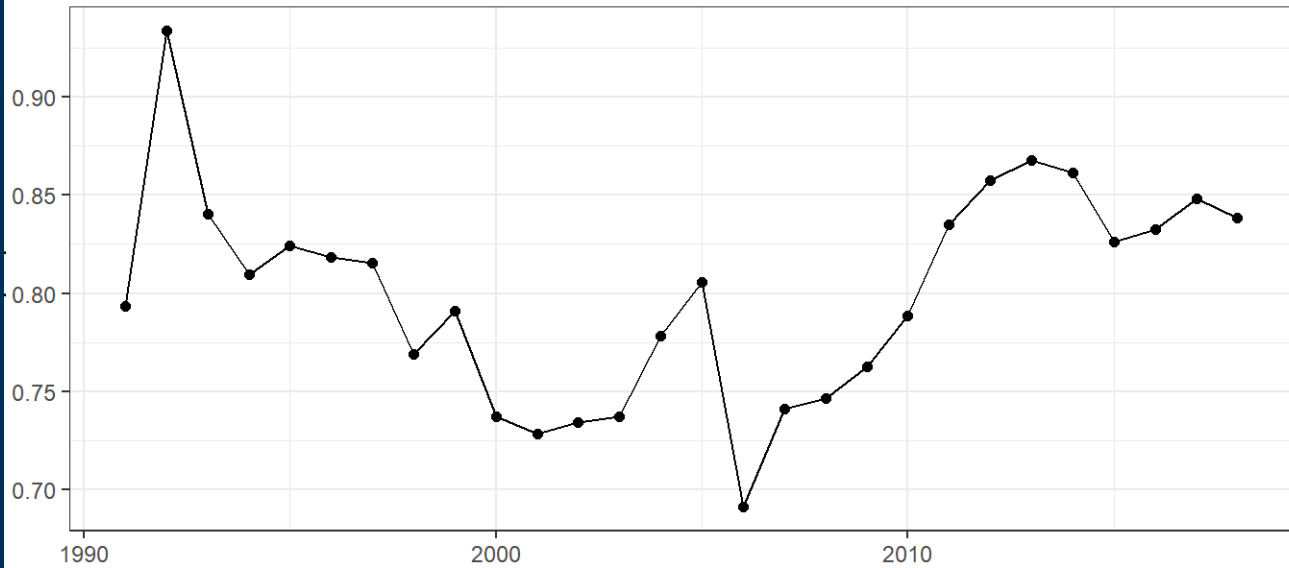
Figure LL. Index scores of communities highly engaged in commercial Cook Inlet salmon drift gillnet harvest for all years from 1991-2017.

Table 1.11. Number of years by commercial Cook Inlet salmon drift gillnet processing and commercial Cook Inlet salmon drift gillnet harvesting engagement level. Alaska communities not listed had low commercial Cook Inlet salmon drift gillnet processing and commercial Cook Inlet salmon drift gillnet harvesting engagement in all years. |

	Harvesting Engagement				Processing Engagement				
	Low	Medium	Medium-High	High	Low	Medium	Medium-High	High	
Anchor Point	2	16	9	0	0	0	0	0	
Anchorage	0	0	8	19	23	3	0	1	
California	6	21	0	0	0	0	0	0	
Delta Junction	26	1	0	0	0	0	0	0	
Fritz Creek	26	1	0	0	0	0	0	0	
Homer	0	0	0	27	7	1	10	9	
Kasilof	0	0	4	23	5	9	9	4	
Kenai	0	0	0	27	0	0	0	27	
Kodiak	22	5	0	0	26	1	0	0	
Nikiski	1	26	0	0	23	1	1	2	
Nikolaevsk	20	7	0	0	0	0	0	0	
Ninilchik	11	16	0	0	20	5	1	1	
Oregon	0	0	0	27	0	0	0	0	
Other US	0	0	10	17	0	0	0	0	
Other Washington	0	0	0	27	0	0	0	0	
Seward	26	1	0	0	24	1	2	0	
Soldotna	0	0	0	27	26	0	1	0	
Sterling	12	15	0	0	0	0	0	0	
Wasilla	13	14	0	0	0	0	0	0	

Extra Material

Proportion of earnings from S03H permit



Average number of permit types fished per year

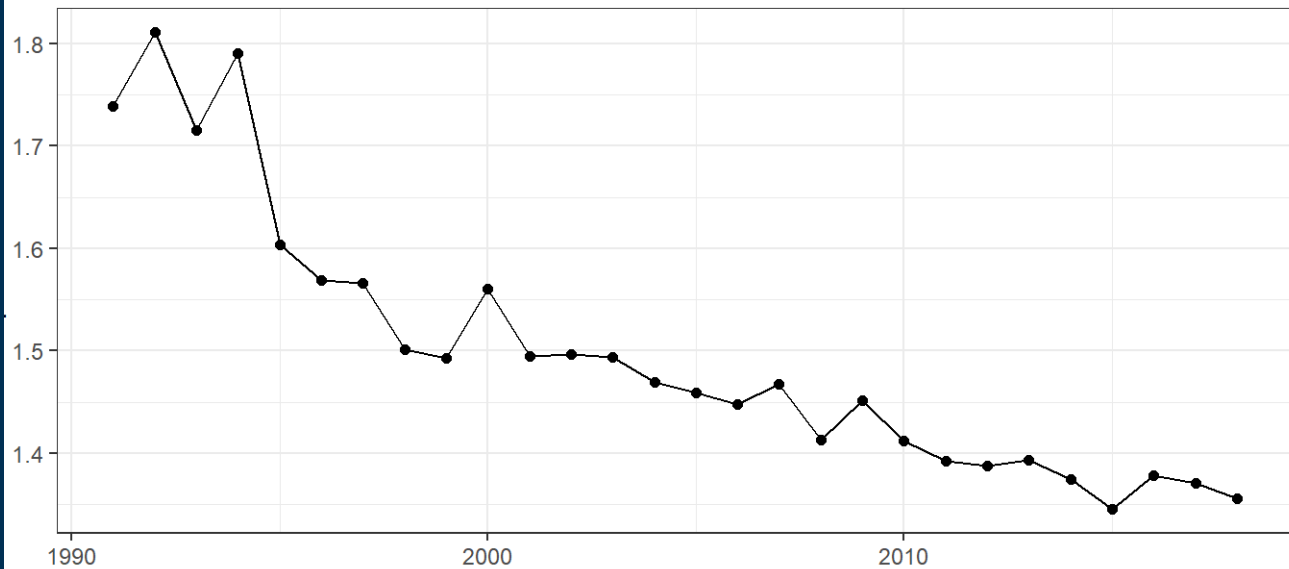


Table 1.8. Communities Highly Engaged in Cook Inlet Salmon Drift Gillnet Commercial Processing for One or More Years From 1991-2017*.

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Anchorage	-0.1	0.0	0.1	0.1	0.0	-0.2	-0.3	-0.3	-0.4	-0.3	-0.3	-0.4	-0.2	-0.3	-0.2	-0.2	-0.2	-0.1	-0.3	1.2	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4
Homer	1.0	0.6	0.7	0.8	1.1	0.8	0.5	0.7	0.0	-0.2	0.5	0.8	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	0.9	1.2	1.3	1.6	1.5	1.4	1.1	1.8	2.4	
Kasilof	0.7	0.3	0.4	0.6	0.5	0.5	0.8	0.6	0.9	0.1	0.2	0.3	-0.2	-0.2	-0.2	-0.2	-0.2	0.2	1.0	0.2	0.7	0.3	0.8	1.8	2.7	1.9	1.7	
Kenai	3.8	4.0	4.0	4.0	3.9	4.0	4.0	4.1	4.0	4.2	4.0	4.0	4.2	4.2	4.2	4.2	4.2	4.2	3.7	3.0	3.7	3.7	3.4	3.4	2.8	3.1	2.8	
Nikiski	-0.4	-0.4	-0.4	-0.3	-0.4	-0.4	-0.4	-0.3	-0.4	-0.3	0.6	0.3	-0.1	0.0	-0.2	-0.2	-0.2	-0.3	1.1	1.8	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	
Ninilchik	-0.1	-0.4	-0.1	-0.1	-0.2	0.0	-0.2	-0.2	-0.2	-0.1	0.0	0.1	-0.2	-0.1	-0.2	-0.2	-0.2	0.1	-0.4	-0.4	0.7	0.5	1.2	-0.2	0.3	-0.2	-0.1	

*Shaded cells are index scores above one (highly engaged) for at least one year from 1991-2017.

We know that communities are engaged but these metrics allow us to quantify this value.

Table 1.10. Communities Highly Engaged in Cook Inlet Salmon Drift Gillnet Commercial Harvesting for One or More Years From 1991-2017*.

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Anchorage	1.8	1.6	1.6	1.3	1.7	1.6	1.4	1.4	1.3	1.5	1.7	1.2	0.8	1.1	0.7	0.7	1.0	1.1	1.0	1.0	1.0	1.0	0.8	0.9	1.0	1.1	1.2
Homer	4.3	4.0	4.1	4.6	4.5	4.4	4.6	4.7	4.8	4.7	4.3	4.3	4.8	5.2	5.8	6.1	5.4	5.7	5.9	5.9	6.0	6.2	6.4	6.3	6.5	6.3	6.5
Kasilof	1.5	1.5	1.4	1.3	1.6	1.6	1.5	1.5	1.5	1.4	1.5	1.8	1.7	1.6	1.3	1.5	1.4	1.3	1.3	1.1	1.1	0.8	0.8	0.9	0.9	1.0	1.2
Kenai	3.5	3.3	3.2	2.6	3.2	3.4	3.1	3.0	3.0	2.7	3.1	3.0	3.0	2.9	2.4	2.6	2.5	2.5	2.6	2.7	2.3	2.3	2.3	2.2	2.2	2.2	1.8
Oregon	2.1	2.5	2.5	2.6	2.1	2.5	2.3	2.3	2.5	2.7	2.5	2.5	2.2	2.0	2.1	1.4	1.8	1.7	1.8	1.8	1.8	1.9	1.6	1.6	1.3	1.1	1.2
Other US	0.8	1.1	1.0	1.7	0.8	1.0	1.1	0.8	0.7	0.8	1.1	1.0	1.0	0.9	0.8	0.8	1.4	1.3	1.3	1.0	1.3	1.2	1.2	1.3	1.3	1.3	1.0
Other WA	2.8	3.1	3.1	3.1	2.7	2.6	2.8	2.8	2.6	2.7	2.9	2.7	2.7	2.2	2.1	1.7	2.3	2.3	1.8	2.1	2.2	1.9	1.6	1.7	1.4	1.6	1.5
Soldotna	1.9	2.1	2.0	1.5	2.1	1.8	2.1	2.2	1.9	2.2	2.2	2.5	2.3	2.1	1.8	1.7	2.2	1.7	1.5	1.5	1.3	1.0	1.1	1.2	1.3	1.6	1.5

*Shaded cells are index scores above one (which is one standard deviation above the mean of zero) for at least one year from 1991-2017.

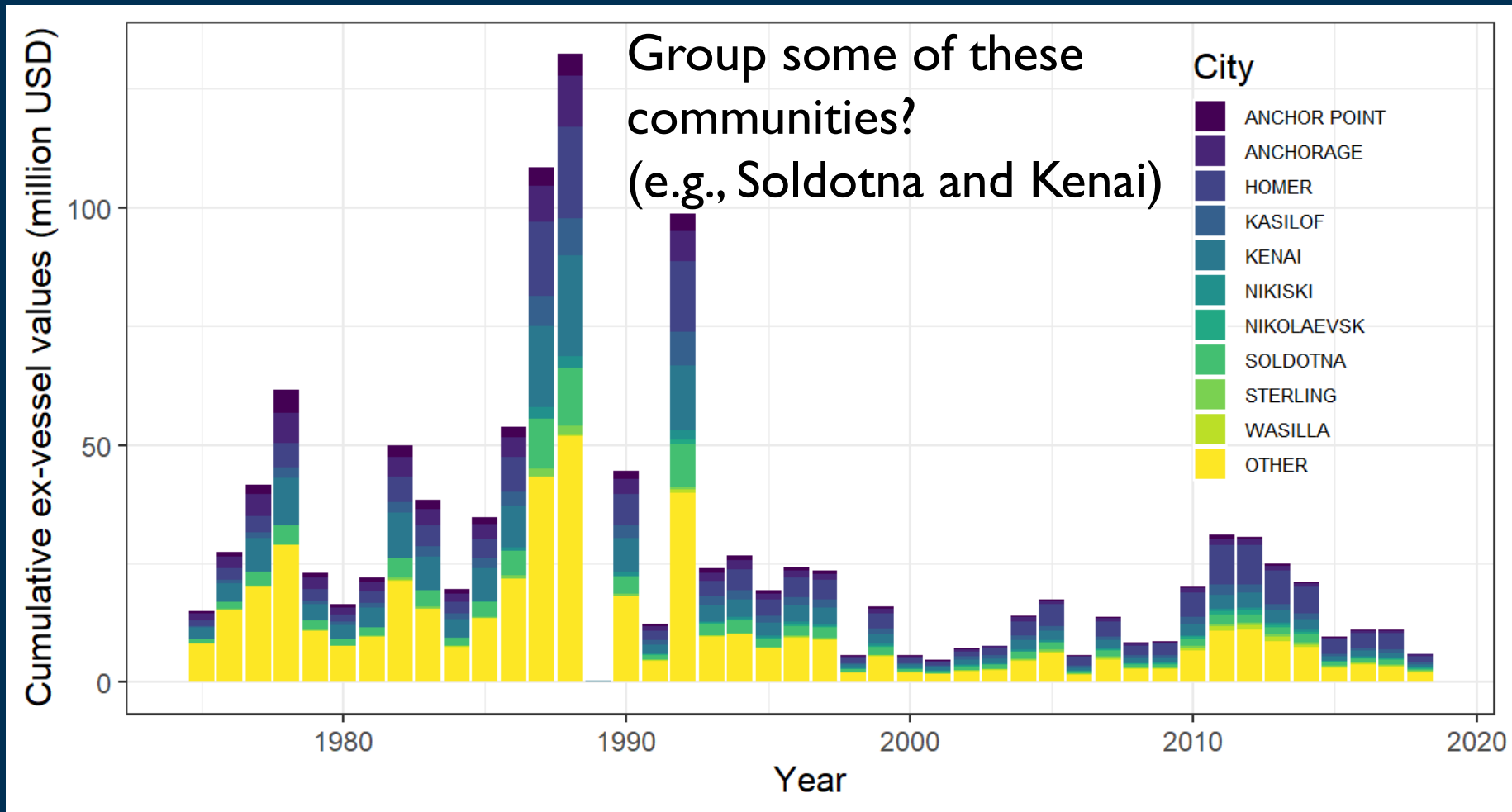


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