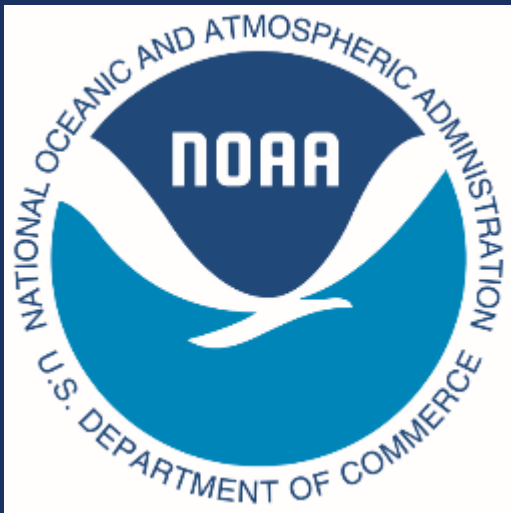
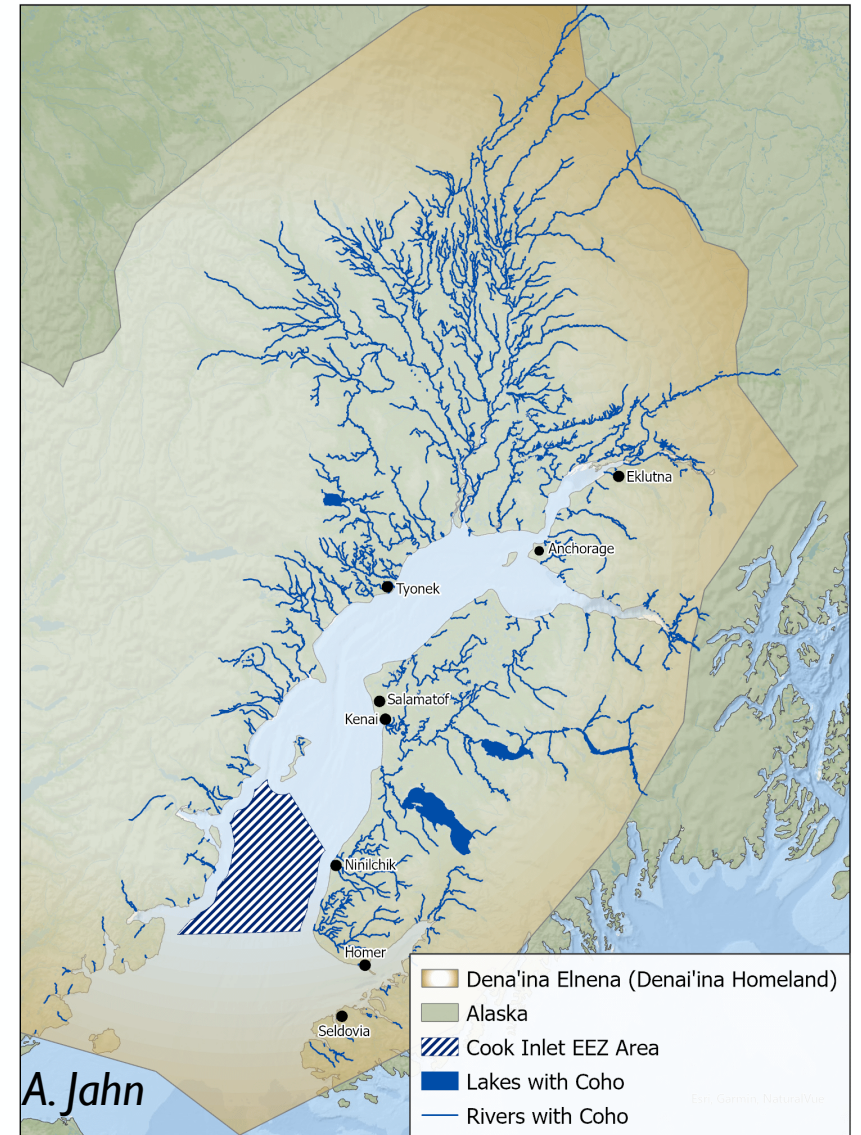


2024 COOK INLET EEZ SALMON: HARVEST SPECIFICATIONS



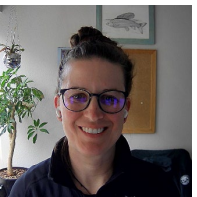
RICH BRENNER NMFS AKRO
LUKAS DEFILIPPO NMFS AFSC
DOUG DUNCAN NMFS AKRO
JOSH RUSSELL NMFS AFSC
GRETCHEN HARRINGTON, ARA, NMFS AKRO
ADAM ZALESKI NMFS AKRO

8 Feb. 2024



ACTION

1. Review the 2024 Preliminary Salmon Stock Assessment and Fishery Evaluation Report for the Salmon Fisheries of the Cook Inlet Exclusive Economic Zone Area (SAFE).
2. Recommend Final 2024 harvest specifications including:
 - a. **Total Allowable Catch (TAC) for each species.**



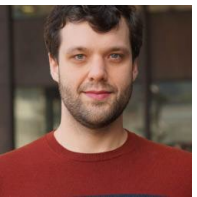
ACTION

SSC Recommendations						AP
Stock	Tier	MSST	Preseason OFL	ABC buffer	ABC=ACL	TAC
Kenai River Late-Run sockeye salmon	1	3,030,000	901,932	0.478	431,123	
Kasilof River sockeye salmon	1	555,000	541,084	0.694	375,512	
Aggregate Other sockeye salmon	3	163,000	887,464	0.200	177,493	
Aggregate Chinook salmon	3	44,200	2,697	0.10	270	
Aggregate coho salmon	3	38,800	357,688	0.100	35,769	
Aggregate chum salmon	3	NA	441,727	0.25	110,432	
Aggregate pink salmon	3	NA	270,435	0.5	135,218	



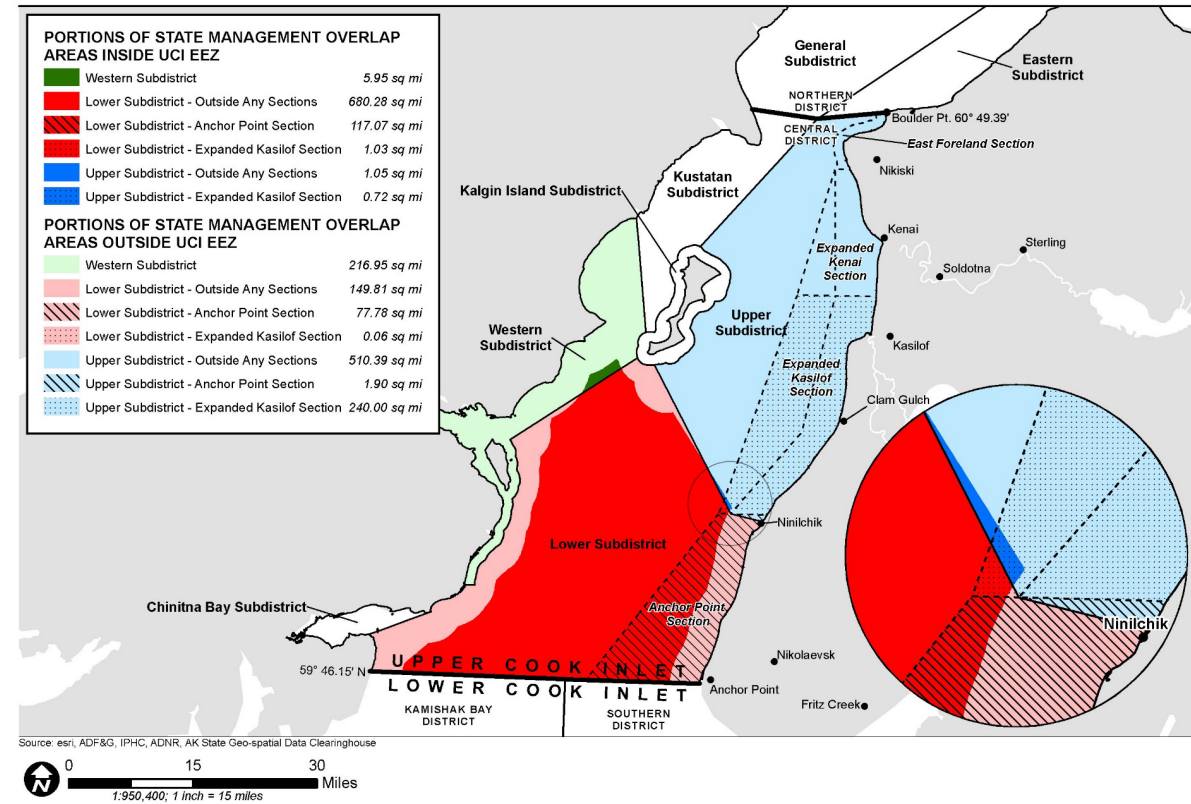
PRESENTATION OVERVIEW

- Management context
 - SAFE overview
 - Approach
 - Identified stocks
 - Recommendations
 - ABC/OFL
 - Future research and work
- TAC setting considerations

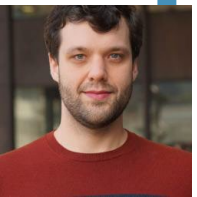


PROPOSED RULE MANAGEMENT CONTEXT*

- Fishing season: ~June 19 to August 15
- Fishing open two days per week, Mondays & Thursdays, 7am to 7pm, until closed by NMFS.
- All UCI EEZ waters open. (dark red area)

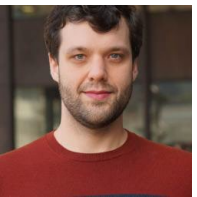


*NMFS is reviewing public comments, and will issue a final rule by May 1 per the court order



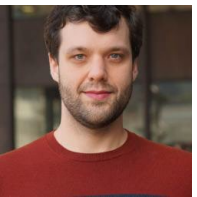
TAC SETTING FOR COMMERCIAL FISHING

- TACs are set to prevent exceeding annual catch limits
- TAC set for each salmon species
 - Considers contribution of component stocks (eg. Kenai, Kasilof, and other sockeye)
- TAC must be less than or equal to ABC recommended by SSC
- May be reduced from ABC to account for:
 - management uncertainty, ecosystem requirements, as well as social and economic considerations



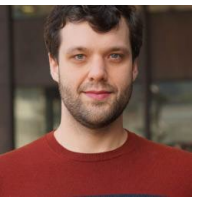
PROPOSED MANAGEMENT OF COMMERCIAL FISHING

- NMFS monitors the commercial fishery daily
- NMFS closes the EEZ to commercial fishing when:
 1. a TAC is reached
 2. information indicates fishing may lead to overfishing (e.g., run failure)
 3. if neither 1 or 2, then on August 15



PROPOSED MANAGEMENT OF COMMERCIAL FISHING

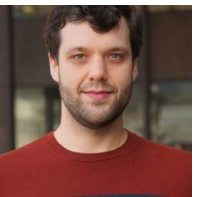
- If fewer fish return than forecasted, NMFS may close early
- If more fish return than forecasted:
 - Fishing can continue up to the TAC amounts
 - If there is time, NMFS may adjust the TAC (could not exceed ABC)
 - Must consider impacts to other stocks and fishery participants
- NMFS may reopen the fishery after closing it, if TAC amounts support it
 - Only within the regular season (June 19 – Aug. 15)



PROPOSED COMMERCIAL FISHING VESSEL REQUIREMENTS

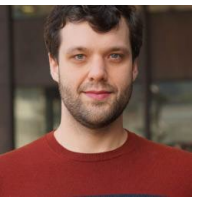
- Salmon Federal Fisheries Permit
- Federal Logbook
- Vessel monitoring system (tracks GPS position of vessel)

- CFEC S03H permit still required to land salmon in AK



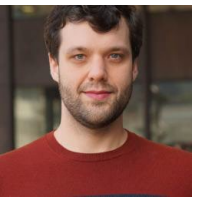
PROPOSED PROCESSOR REQUIREMENTS

- Report through eLandings by noon of the following day
 - Use existing stat areas with EEZ identifier
- Salmon Federal Processor Permit
- Registered Salmon Receiver Permit
 - for catcher/sellers, fish transporters, and other non-processors receiving deliveries



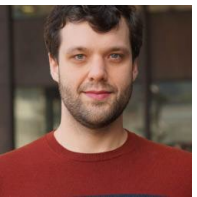
PROPOSED COMMERCIAL FISHING PROHIBITIONS

- The following would be prohibited:
 - Fishing in State and EEZ waters on the same calendar day
 - Discarding salmon
 - Beginning a fishing trip with salmon already onboard a vessel
 - Having non-commercial caught salmon onboard
 - Landing or transferring fish in the EEZ
 - Conducting other fishing while drift gillnetting in the EEZ
 - Processing salmon at sea



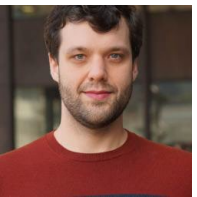
PROPOSED SALTWATER RECREATIONAL FISHING MGMT.

- Open year round, less than 0.01% of historical EEZ harvests (66 fish)
- All UCI EEZ waters open
- Bag limits for Chinook salmon:
 - From April 1 to August 31, 1 per day, 1 in possession of any size.
 - From September 1 to March 31, 2 per day, 2 in possession of any size.
- Bag limits for other salmon: 6 per day, 6 in possession, only 3 per day, 3 in possession may be coho (silver) salmon.



PROPOSED SALTWATER RECREATIONAL FISHING MGMT.

- Anglers may not combine State and EEZ limits
- NMFS may prohibit fishing/retention if an ACL is exceeded
- Harvest informed by:
 - creel surveys
 - statewide harvest survey
 - charter logbooks



2024 SAFE REPORT: THE ENVIRONMENTAL ASSESSMENT AND REGULATORY IMPACT REVIEW (EA/RIR ANALYSIS)

SAFE: Stock Status Summaries Section

- Social and Economic Analysis
- Subsistence, personal use, sport, commercial considerations
- Description of methods, estimates, assumptions
- Incorporated by reference into 2024 SAFE
- Presented to the AP/Council April of 2023
- SDC methods previously presented (2019)

DRAFT

**Environmental Assessment/Regulatory Impact Review
for Proposed Amendment 16
to the Fishery Management Plan for the Salmon Fisheries in the
EEZ Off Alaska**

September 2023

Lead Agency: National Marine Fisheries Service, Alaska Region National Oceanic and Atmospheric Administration

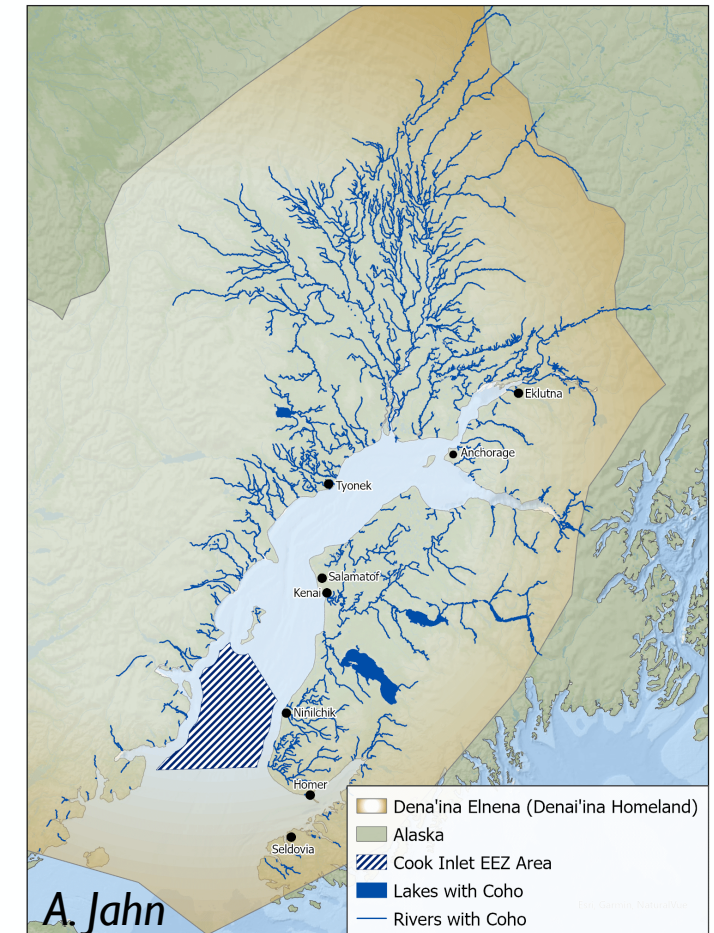
Responsible Official: Jonathan M. Kurland, Administrator Alaska Regional Office, National Marine Fisheries Service

For further information contact: Doug Duncan, National Marine Fisheries Service
P.O. Box 21668, Juneau, AK 99802-1668
(907) 586-7221

Abstract: This Environmental Assessment/Regulatory Impact Review analyzes proposed management measures to address management of salmon fishing in the Cook Inlet EEZ. The *Fishery Management Plan for the Salmon Fisheries in the EEZ off Alaska* (FMP) manages the salmon fisheries in the United States Exclusive Economic Zone (EEZ; 3 nautical miles to 200 nautical miles offshore) off Alaska. The North Pacific Fishery Management Council developed this FMP under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). In 2012, the Council comprehensively revised the FMP to comply with the recent Magnuson-Stevens Act requirements, such as annual catch limits and accountability measures, and to more clearly reflect the Council's policy with regard to State of Alaska management authority for commercial and sport salmon fisheries in the EEZ. A portion of this was challenged, and in response to a 2016 United States Court of Appeals Ninth Circuit ruling, the Council took final action in December 2020 to amend the FMP to manage the commercial salmon fishery that occurs in the EEZ waters of Cook Inlet that had been removed from Federal management with the 2012 revisions to the FMP. This action, Amendment 14 to the Salmon FMP, implemented Federal management of the EEZ waters of Cook Inlet and closed them to commercial salmon fishing. NMFS implemented Amendment 14 (86 FR 60568, November 3, 2021), but on June 21, 2022, the U.S. District Court for the District of Alaska vacated the implementing regulations for Amendment 14. NMFS is now considering new management measures to comply with Magnuson-Stevens Act requirements for the Cook Inlet salmon fishery in the EEZ, such as status determination criteria, annual catch limits, and accountability measures in response to both the 2016 Ninth Circuit ruling and the 2022 summary judgment opinion of the Alaska District Court in *UCIDA et al. v. NMFS*.

OVERVIEW

- SAFE goal: provide information needed to manage the Federal salmon fisheries in the Cook Inlet EEZ Area as per National Standard I guidelines
 - recommend harvest specifications
 - prevent overfishing
- Presentation goal: Provide information to set TACs for the Cook Inlet EEZ and provide updated recommendations from the SSC



TIER SYSTEM

- Assesses stocks based on available information
 - Tier 1: salmon stocks with escapement goals and stock-specific harvests
 - Tier 2: salmon stocks managed as a complex, with specific salmon stocks with escapement goals as indicator stocks
 - Tier 3: salmon stocks with no reliable estimates of escapement or total run size
- Tiers define methods used to determine acceptable biological catch (ABC), annual catch limit (ACL), overfishing limit (OFL), minimum stock size threshold (MSST), maximum fishery mortality threshold (MFMT)

TIER SYSTEM APPROACH (SIMPLIFIED)

- Tiers 1 & 2
 - $ABC = [(run\ forecast - escapement\ target - projected\ State\ harvests)] * buffer$
- Tier 3
 - $ABC = (max\ historical\ EEZ\ harvest) * buffer$

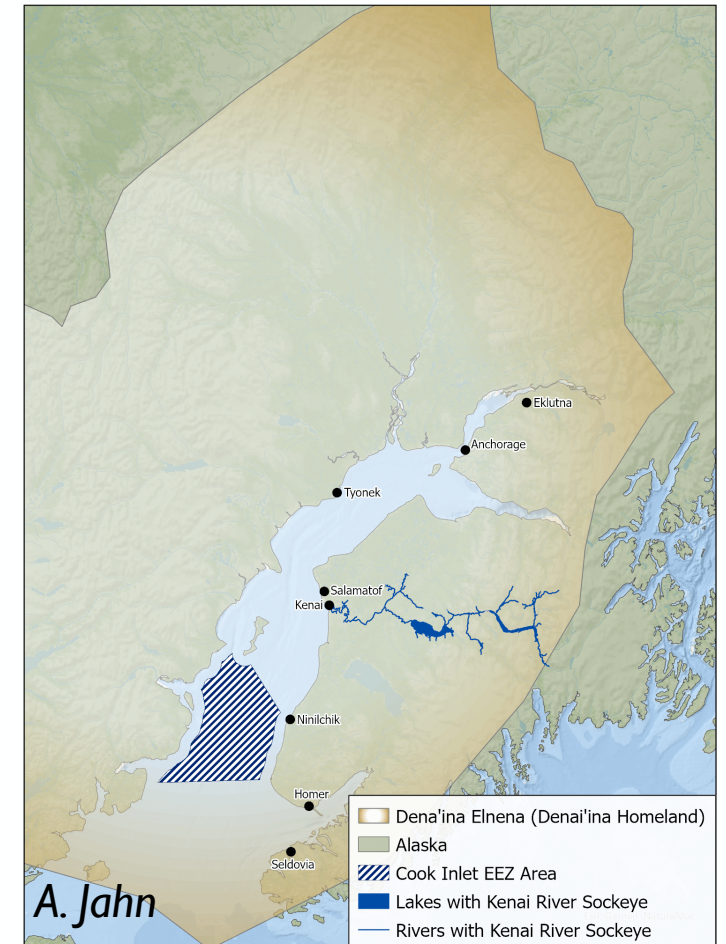
Overfished – below $\frac{1}{2}$ of the escapement goal

Overfishing – exceeding maximum fishery mortality rate or historical max catch

- No previous Federal fishery, so no overfished/overfishing determinations in 2024

I. KENAI LATE-RUN SOCKEYE SALMON: STOCK DEFINITION (SAFE PG. 23)

- Federal definition consistent with State:
 - Spawning escapement goal (750K – 1.3M).
 - ADF&G harvest, escapement goal, genetic stock composition, escapement data, brood tables, and age compositions data available.
- **Tier I**



PRESEASON MODELS AND OFL → ABC DETERMINATION (SAFE STATUS DETERMINATION CRITERIA SECTION, PG. 14)

Preseason
forecasts

Preseason
state harvest
forecast

Preseason run
size forecast

ARIMA models

Preseason OFL
determination

Preseason
OFL

Buffer
estimation

Buffer factor
(b)

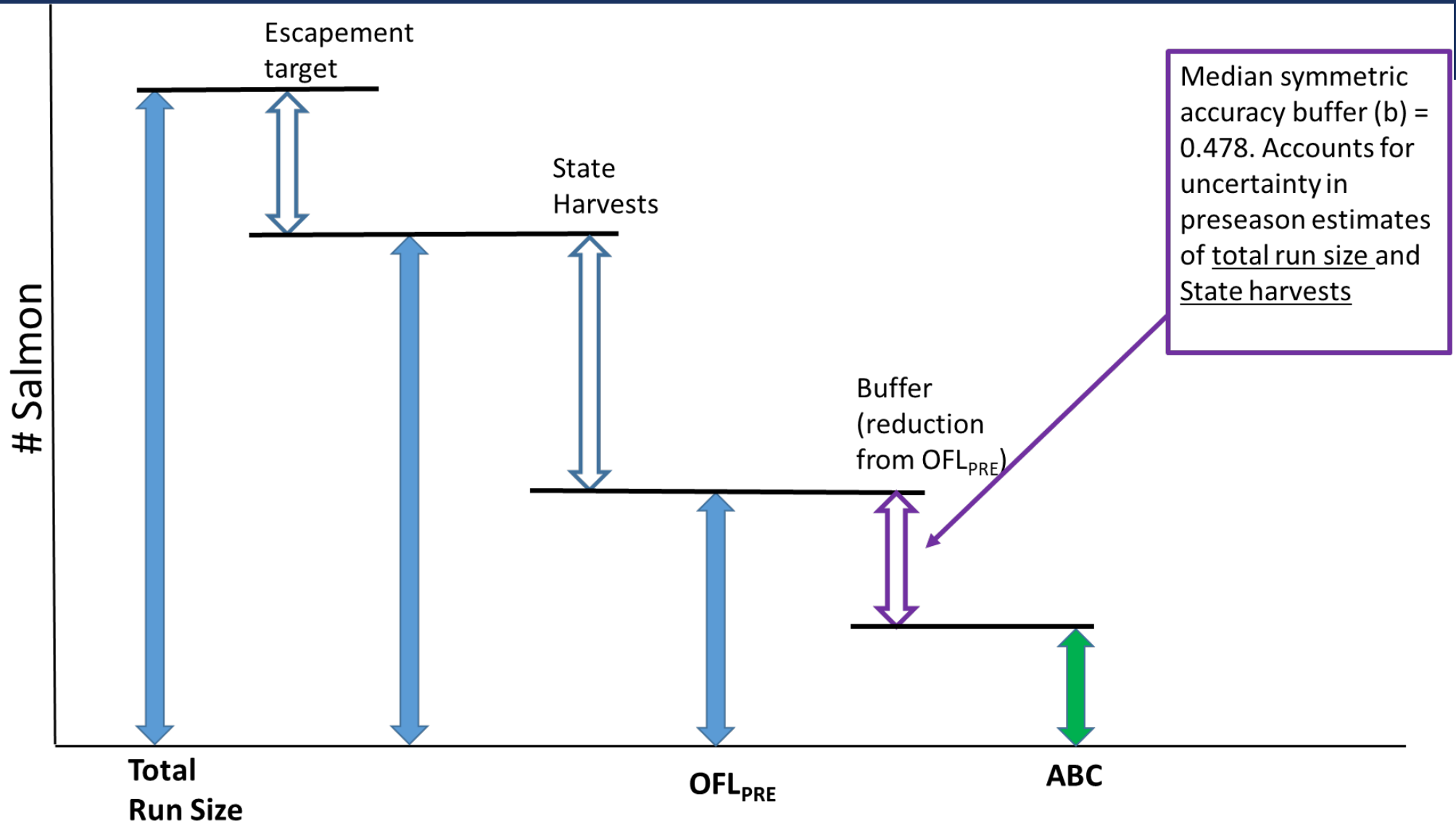
Preseason ABC
determination

Preseason
ABC

Retrospective % error
 $OFL_{preseason}/OFL_{postseason}$

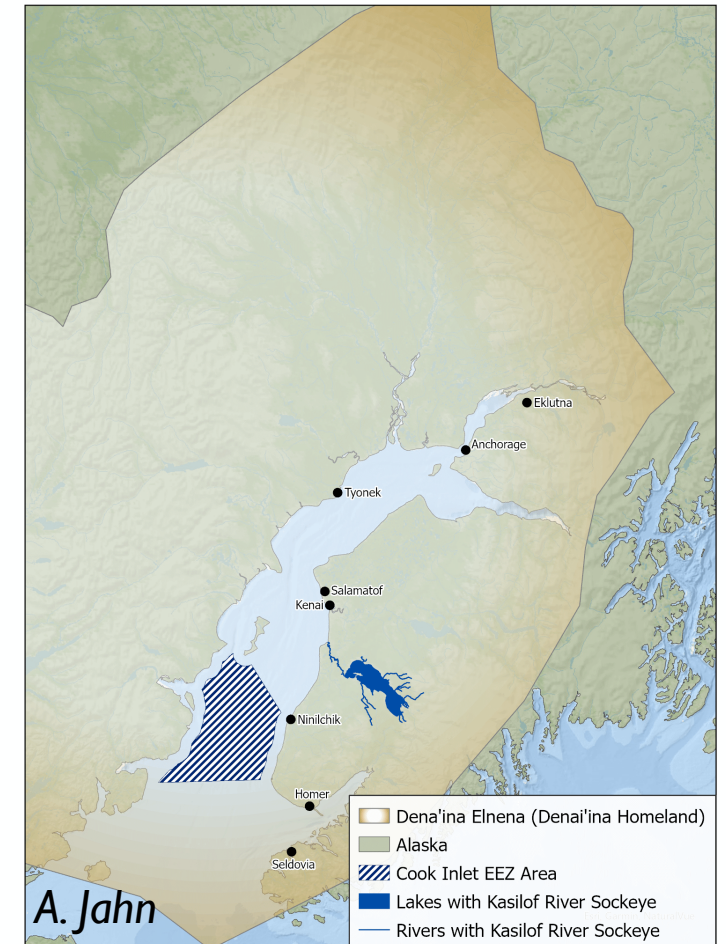


I. KENAI LATE-RUN SOCKEYE SALMON: TIER I HARVEST SPECS



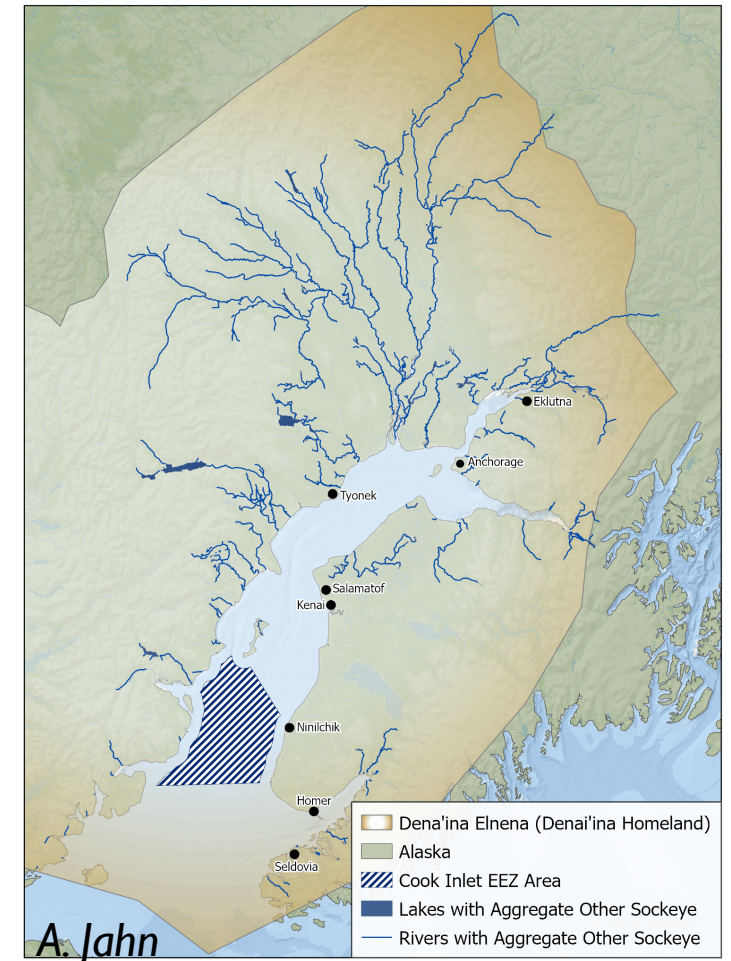
2. KASILOF SOCKEYE SALMON: STOCK DEFINITION (SAFE PG. 28)

- Federal definition consistent with State
 - Escapement goal: 140-370K
 - Smsy used to determine ABC
 - ADF&G harvest and escapement data
 - Quantities estimated for this SAFE
 - recent sportfish harvests; proportion of drift gillnet harvest in EEZ; proportion Kasilof sockeye salmon in recent harvests
- **Tier I**



3. AGGREGATE “OTHER” SOCKEYE SALMON: STOCK COMPLEX (SAFE PG. 32)

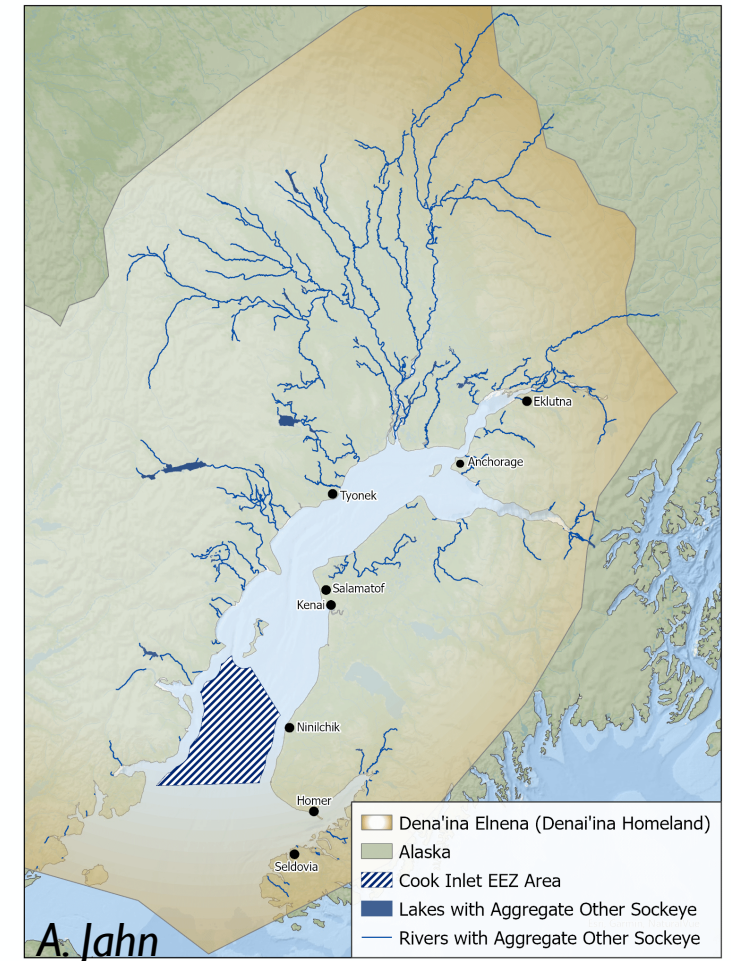
- Federal definition = All other UCI sockeye salmon harvested in the EEZ, except Kenai and Kasilof sockeye salmon
 - Escapement goal for 4 indicator stocks: Fish Creek (15,000–45,000); Chelatna Lake (20,000–45,000); Judd Lake (15,000–40,000); and Larson Lake (15,000–35,000): **65K total**
 - ADF&G harvest and escapement data; genetic stock composition data.
 - SAFE: some recent values estimated (sportfish harvests; proportion harvested in EEZ)



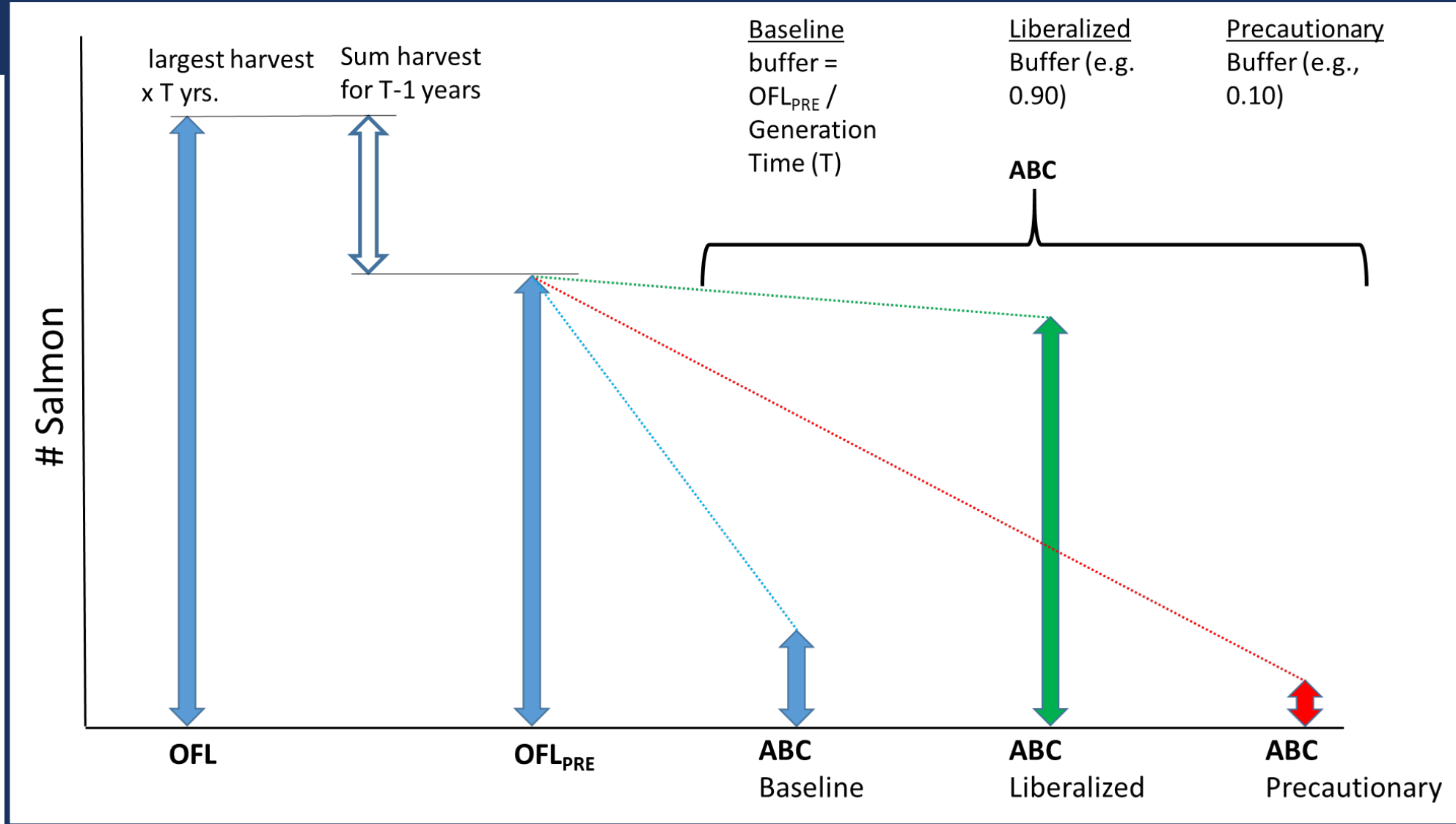
3. AGGREGATE “OTHER” SOCKEYE SALMON: TIER RECOMMENDATION

Considerations:

- Many unmonitored systems
- Gaps in monitoring index systems: Judd Lake & Chelatna R.
- Inability to estimate total run size for SDC and harvest specs.
- **Tier 3**, with four index systems to assess overfished

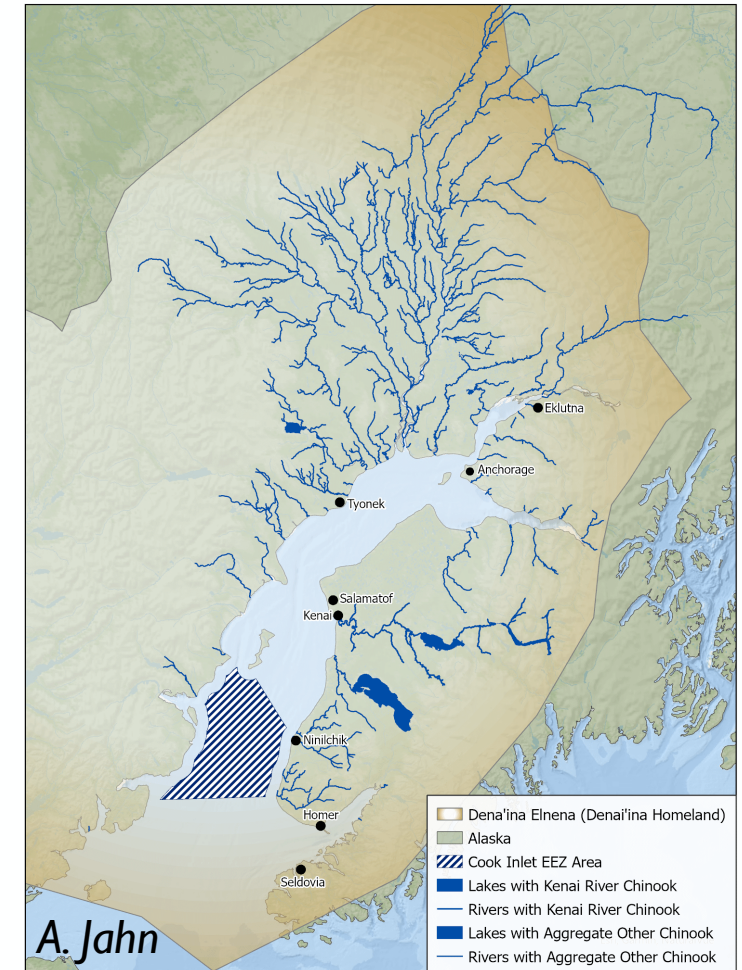


TIER 3: HARVEST SPECS EXPLAINED



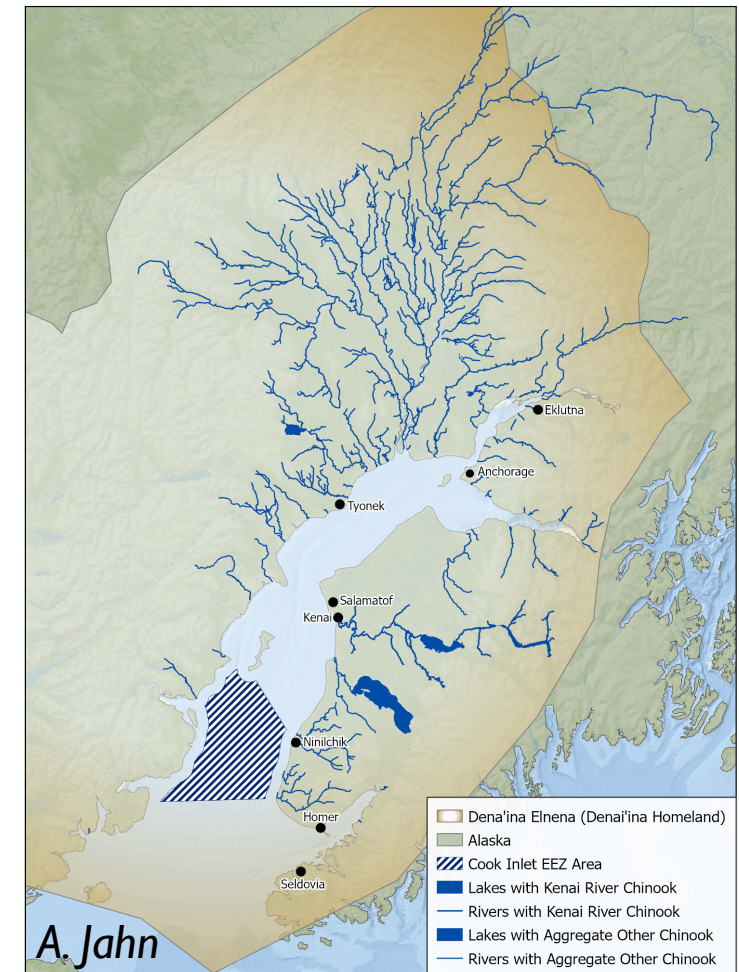
4. AGGREGATE CHINOOK SALMON: STOCK COMPLEX DEFINITION (SAFE PG. 40)

- Any Chinook salmon harvested in the Cook Inlet EEZ
- Includes tributaries and drainages known to contain Chinook salmon throughout UCI



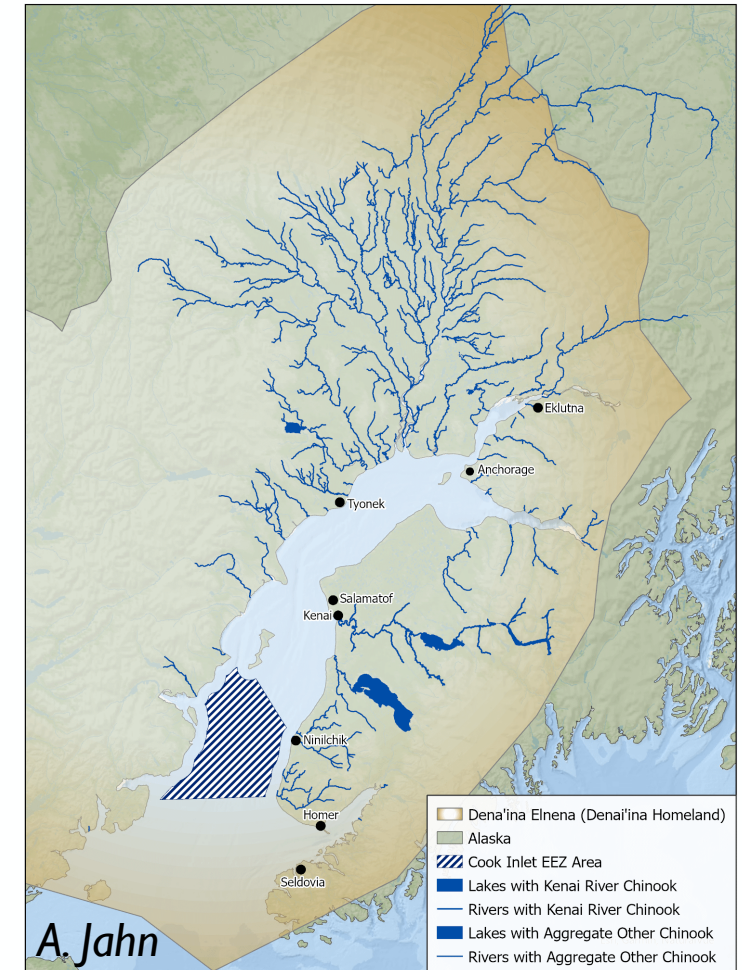
4. AGGREGATE CHINOOK SALMON: TIER

- Total escapements to entire stock complex unknown, therefore total run size unknown
- No genetic data from drift gillnet harvest
- **Tier 3**
- Kenai Late Run Large Chinook salmon as an indicator stock to assess overfished status



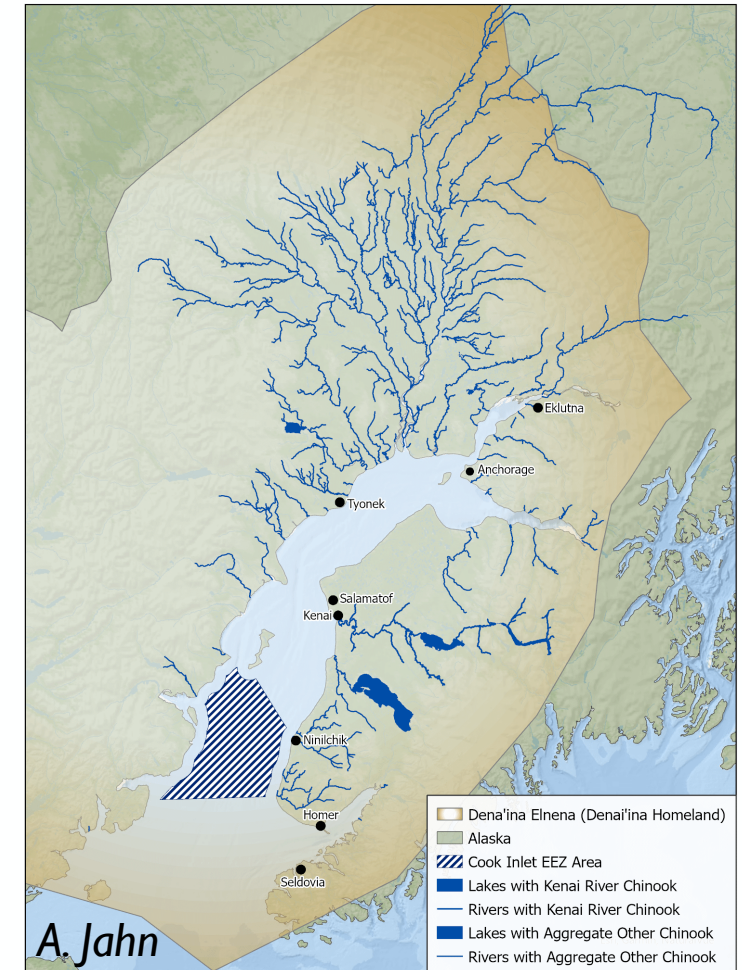
4. AGGREGATE CHINOOK SALMON: CONSIDERATIONS

- Chinook salmon in a low state of abundance throughout N. Pacific.
- 5 State of Alaska “Stock of Concern” designations for UCI Chinook salmon:
 - Chuitna, Theodore, and Eastside Susitna rivers, Alexander Creek, and Kenai Late Run Large.



4. AGGREGATE CHINOOK SALMON: CONSIDERATIONS

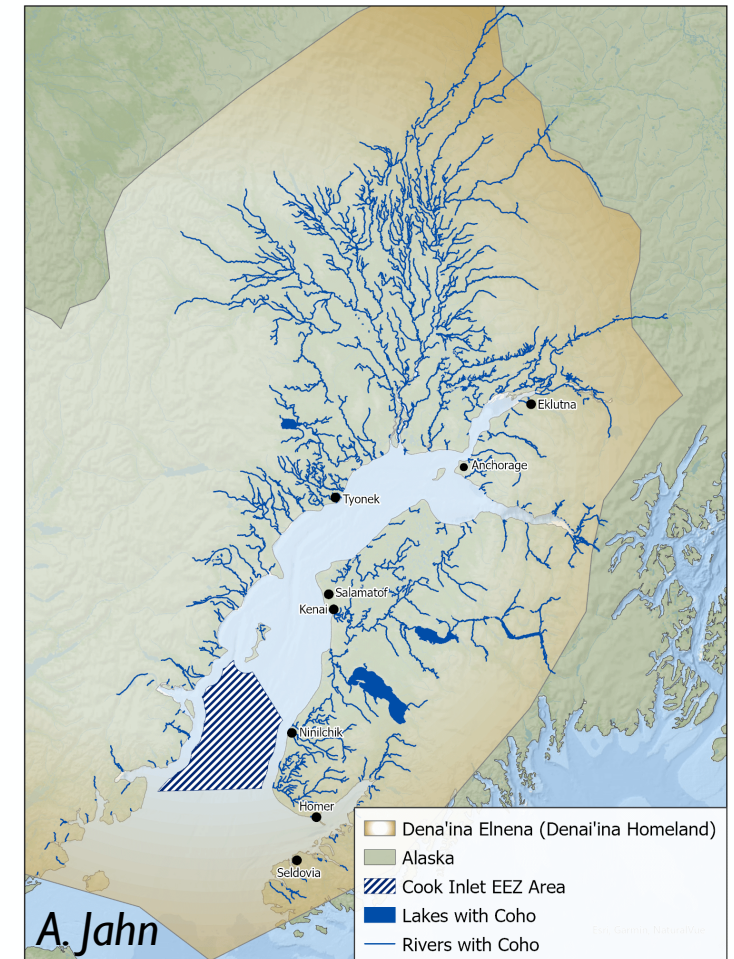
- Susitna Chinook stocks not thought to be harvested in appreciable quantities in drift gillnet fishery (Reimer and DeCovich, 2020).
 - Run timing mismatch.
- Unknown stocks harvested, but only 51 fish total in 2023.
- Small EEZ harvests of Chinook.



5. AGGREGATE COHO SALMON: STOCK COMPLEX DEFINITION (SAFE PG. 44)

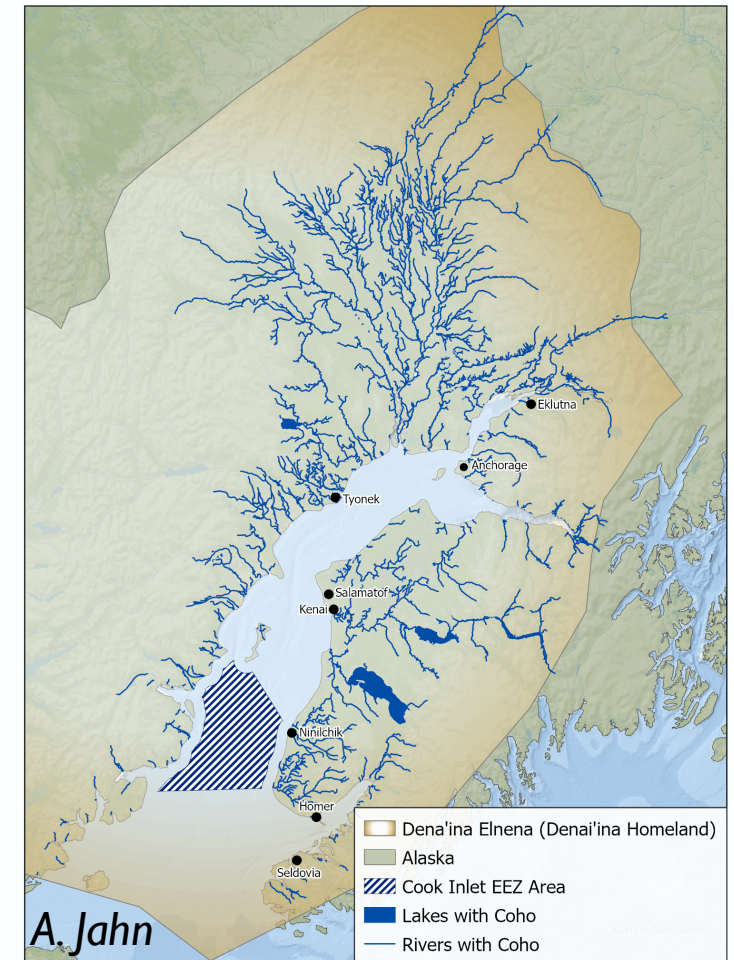
Federal stock definition:

- All coho salmon harvested in the Cook Inlet EEZ Area.
- Two indicator stocks (Deshka and Little Susitna rivers).
- All unmonitored drainages are part of the stock complex



5. AGGREGATE COHO SALMON: DATA AVAILABLE

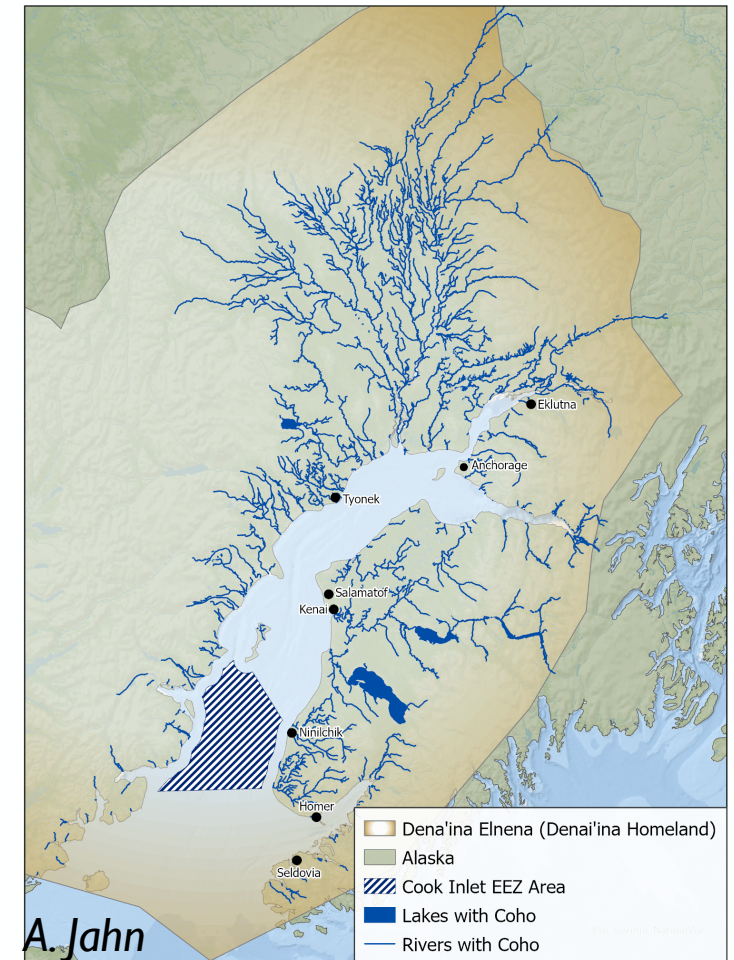
- Escapement data and goals
 - Deshka R. (10,200 – 24,100)
 - Little Susitna R. (9,200 – 17,700)
 - 19,400 total
 - Two additional systems monitored by ADF&G (Jim and Fish creeks).
- ADF&G harvest estimates for all components
 - Recreational, personal use, commercial
- ADF&G genetic stock composition of harvests for select years (2013-2016).



5. AGGREGATE COHO SALMON: TIER CONSIDERATIONS

Same considerations as for Aggregate “Other” Sockeye Salmon:

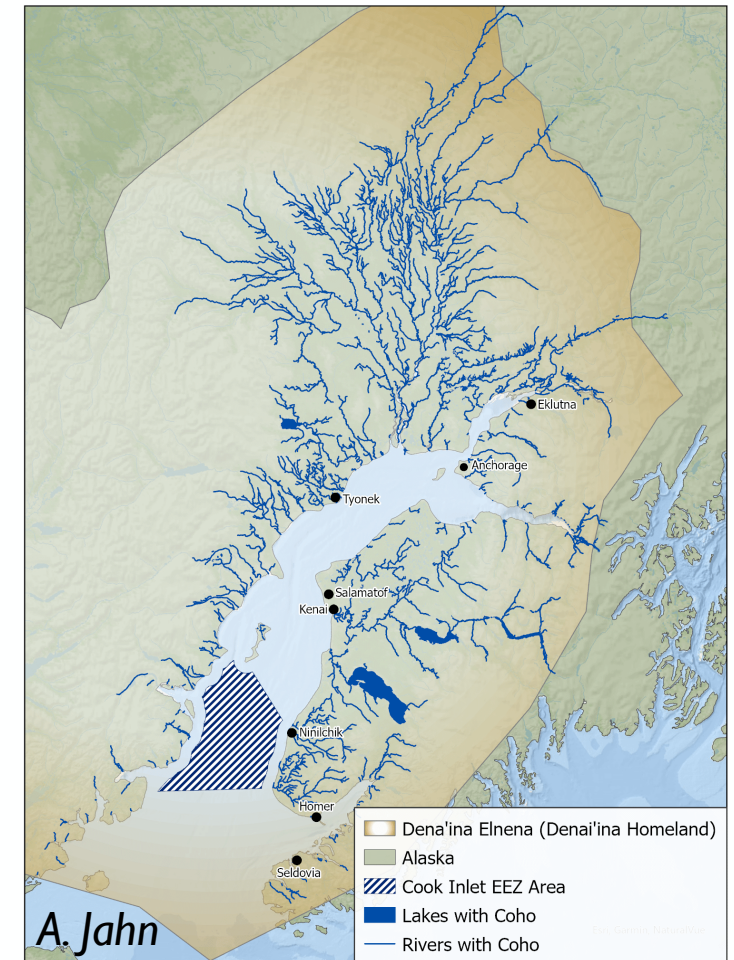
- Incomplete escapement monitoring via weirs.
 - Inability to estimate escapement for entire stock complex.
 - Inability to estimate total run size.
 - Risk of overestimating potential yield.
 - Risk of declaring overfishing/overfished when not warranted
-
- **Tier 3**



5. AGGREGATE COHO SALMON: STOCK CONSIDERATIONS

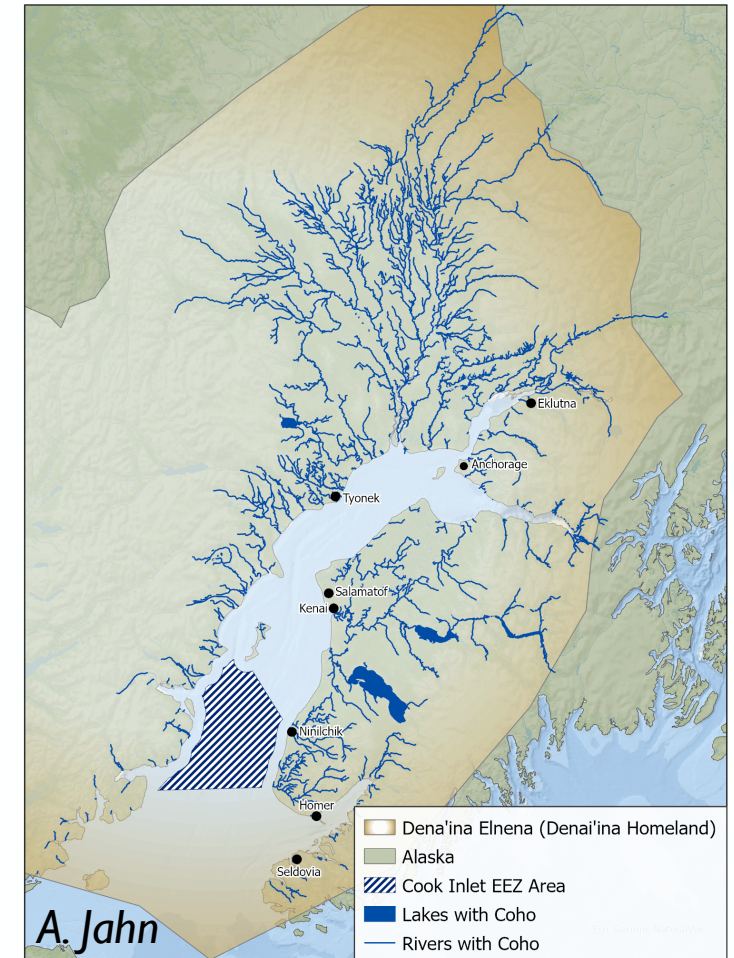
Escapement monitoring missing/incomplete

- Deshka River (missing): 2020, 2021, 2022
- Little Susitna River (incomplete): 2014, 2018, 2019, 2022
- Stock would have been subject to overfishing in 2013 (if Federal mgmt.)
- Overall: Caution warranted



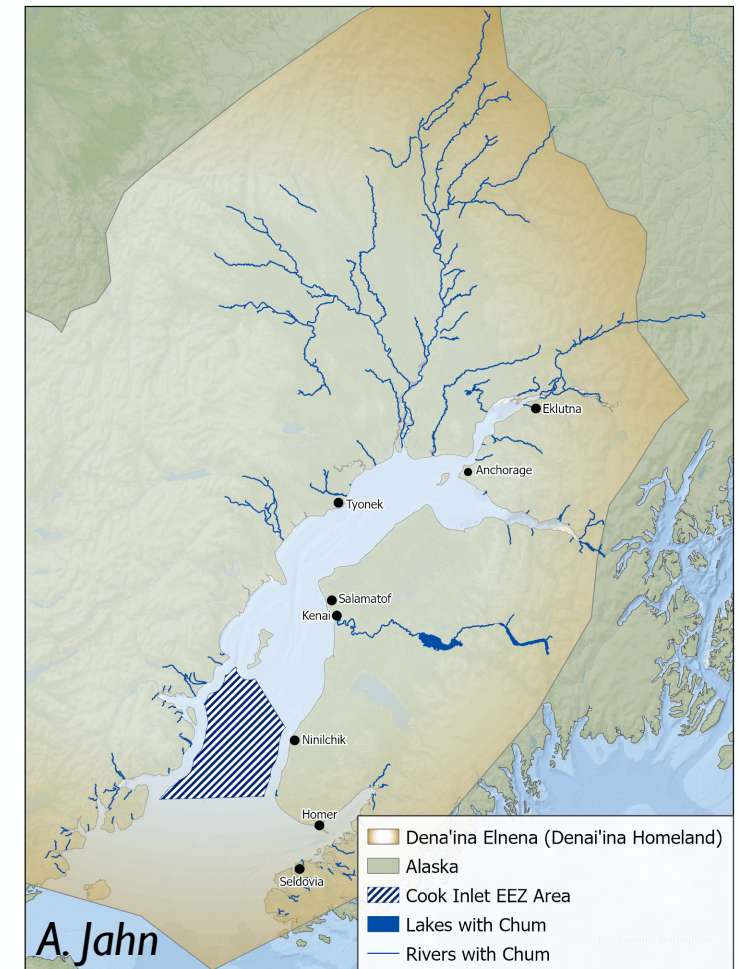
5. AGGREGATE COHO SALMON CONSIDERATIONS

- Escapement estimates incomplete, missing, below goal = CAUTION.
- Species subject to gillnet harvest.
- Genetic data shows drift gillnet harvests of fish bound for N. Cook Inlet.
 - State FMP: prioritization of coho salmon passing through Central district.
- Literature: coho salmon a preferred prey item of endangered Cook Inlet beluga whales.



6. AGGREGATE CHUM SALMON: STOCK COMPLEX DEFINITION (SAFE PG. 50)

- All chum salmon harvested in the Cook Inlet EEZ Area.
- All UCI drainages/tributaries with chum salmon are part of the stock complex.



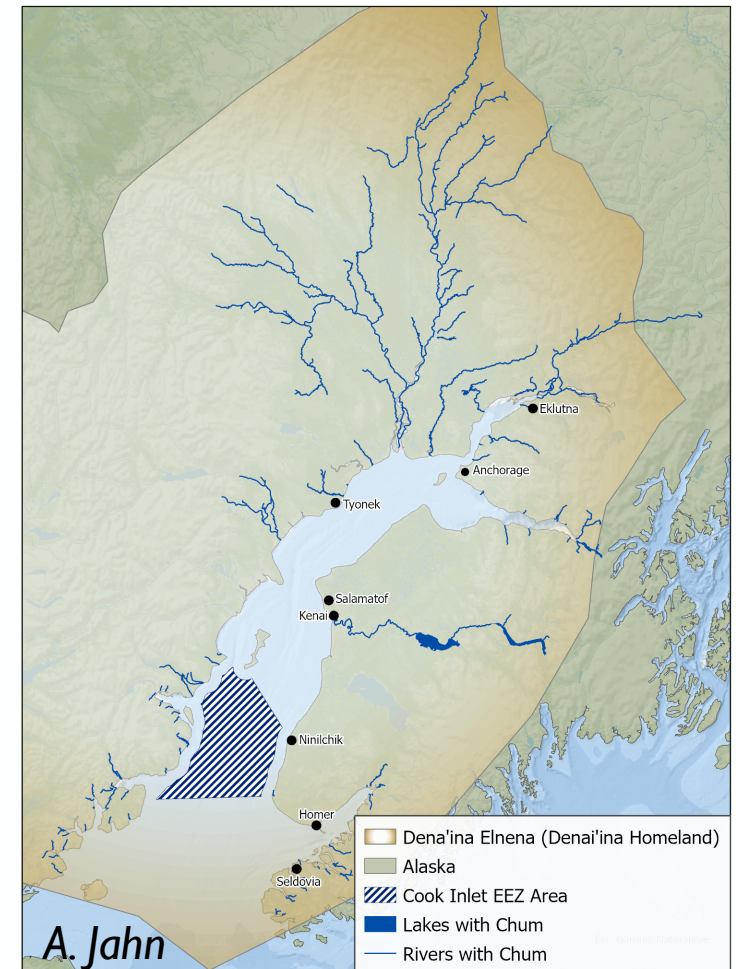
6. AGGREGATE CHUM SALMON: DATA AVAILABLE

Escapement data and goals

- Clearwater Ck. (3,500 – 8,000)
- via peak aerial survey

ADF&G harvest estimates for all components:
Recreational, personal use, commercial

SAFE assumption: no reliable estimate of stock
complex-wide escapement or total run size

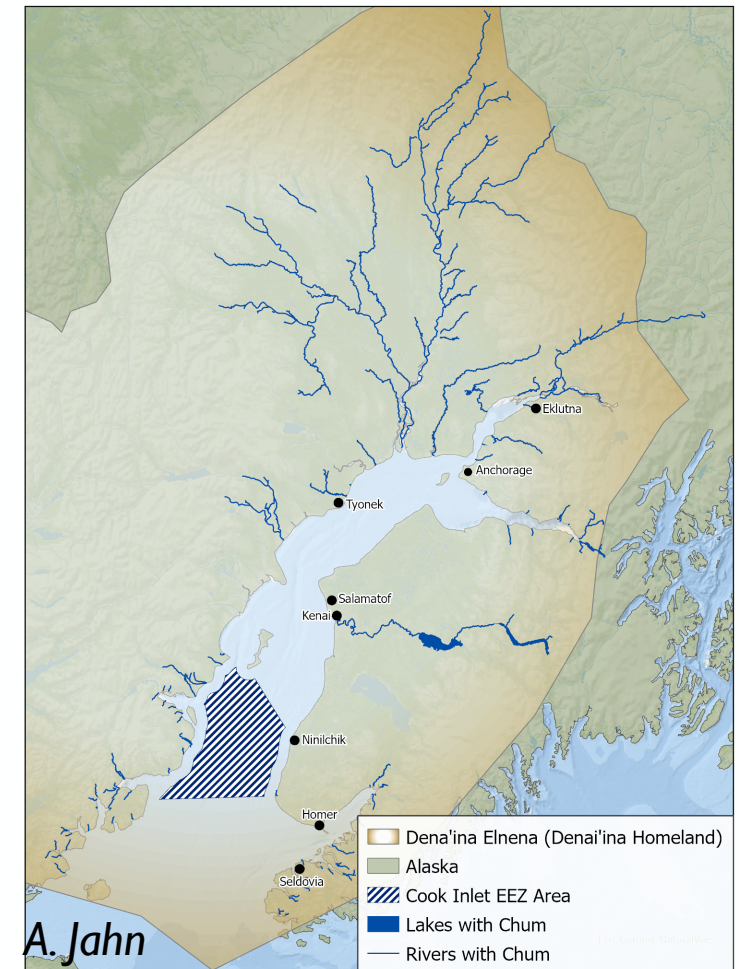


6. AGGREGATE CHUM SALMON TIER



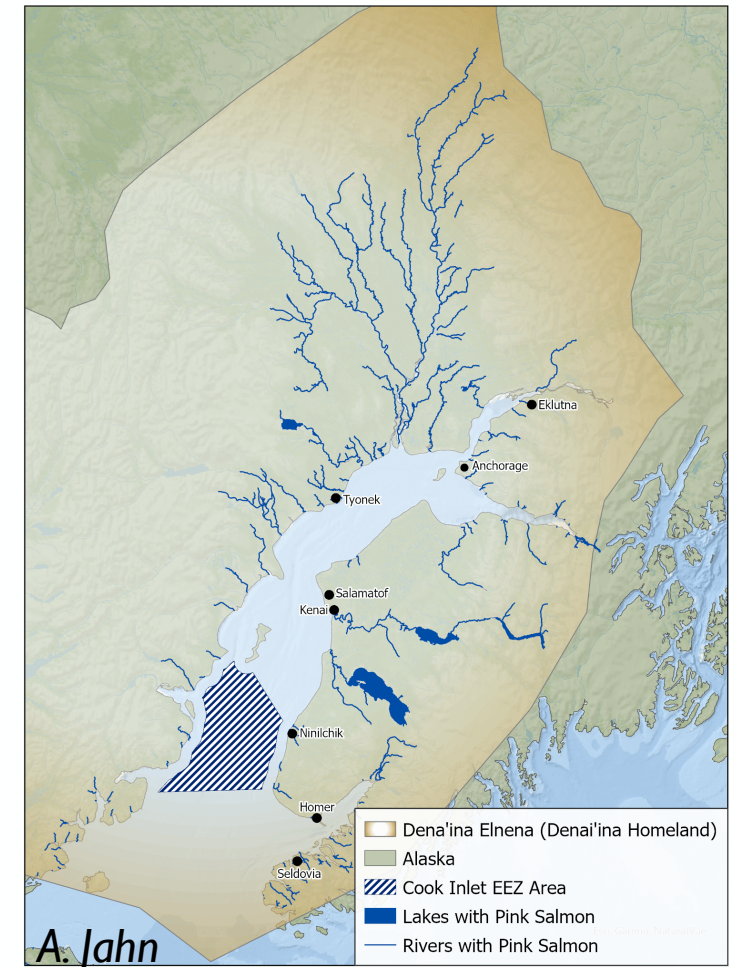
No reliable estimate of spawning escapement.

Therefore, **Tier 3** for SDC and harvest specifications.



7. AGGREGATE PINK SALMON (EVEN YEAR): STOCK COMPLEX DEFINITION (SAFE PG. 53)

- All pink salmon harvested in the Cook Inlet EEZ Area
- No indicator stocks
- All unmonitored drainages are part of the stock complex



7. AGGREGATE PINK SALMON: DATA AVAILABLE

Escapement data and goals

- No escapement goals

ADF&G harvest estimates for all components

- Recreational, personal use, commercial

SAFE Estimates: recreational harvests for recent years; proportion harvested in the EEZ.

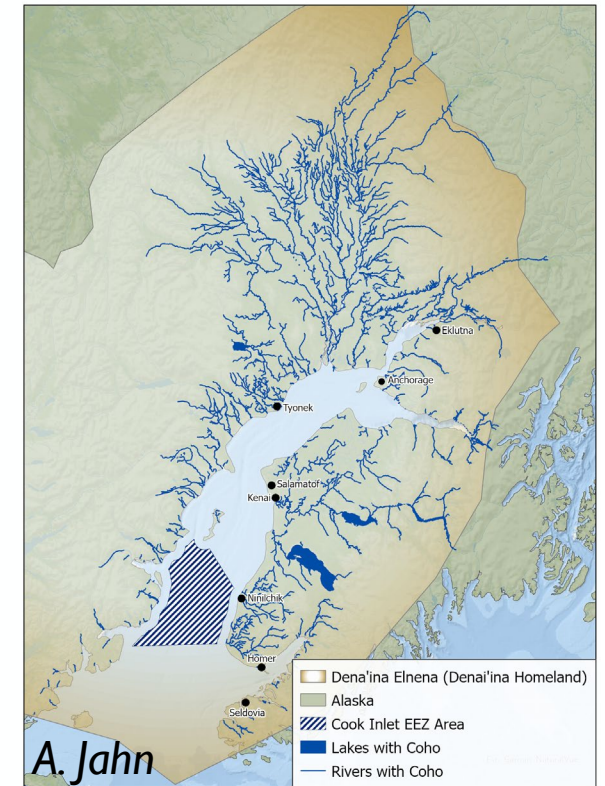
Tier 3 for SDC and harvest specifications.



OVERALL RECOMMENDATIONS

Research to:

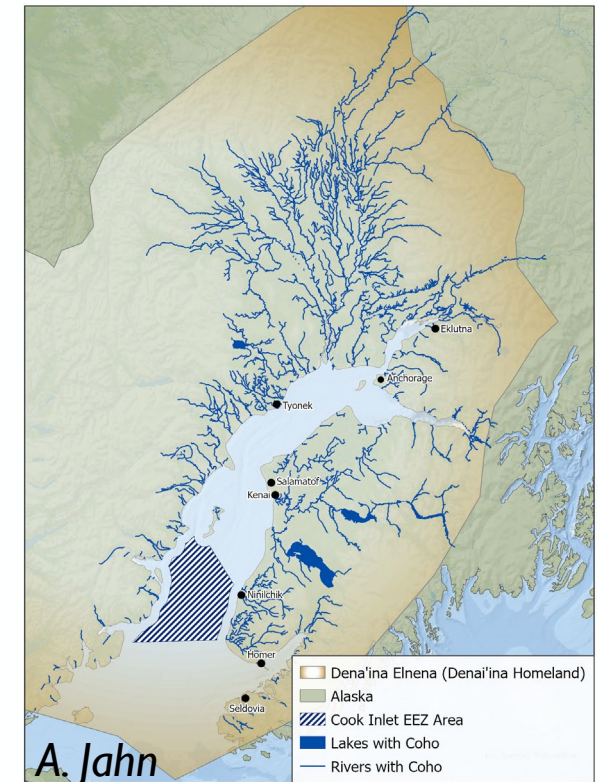
- Estimate total run size for coho and Aggregate “Other” Sockeye salmon in particular.
 - Improved confidence in future SAFE recommendations.
 - Better inform estimates of potential yield and risks.
- Improve forecasts of salmon run size and run timing for UCI salmon stocks harvested in the EEZ.



CLOSING COMMENTS

The SAFE is a first step, more improvements in the future.

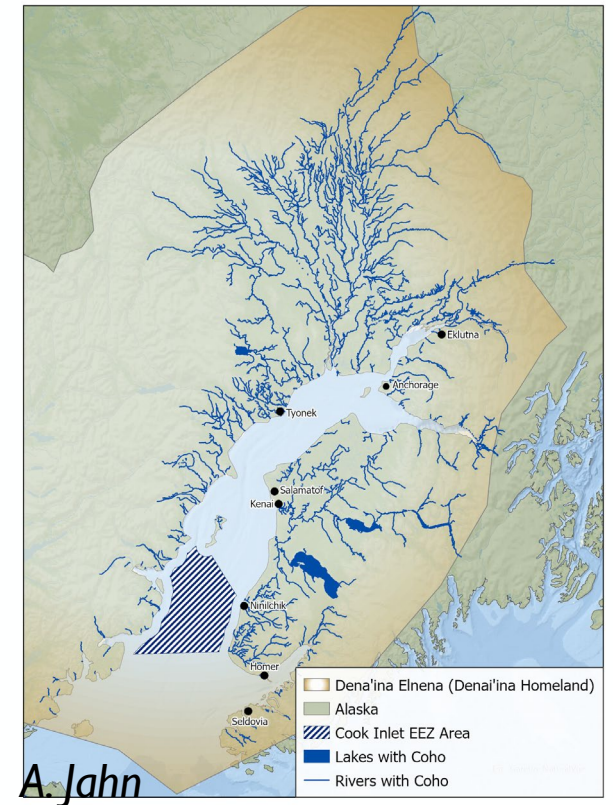
Getting beyond historical estimates: actual EEZ harvests will provide better information to inform future Federal fisheries management.



CLOSING COMMENTS: ADDITIONAL UNCERTAINTY & CONSIDERATIONS

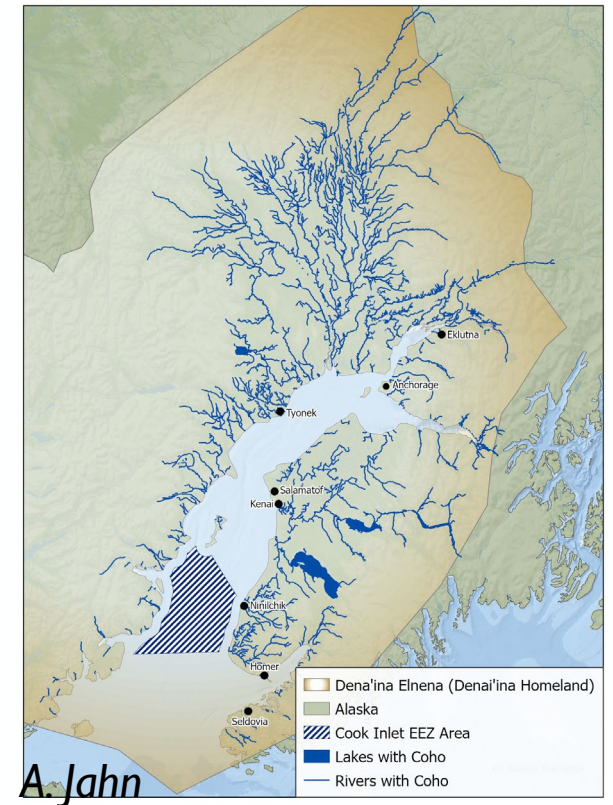
Accounting for Management Uncertainty:

- How much participation in the new Federal fishery?
- Direct reporting of EEZ harvests, delays?
- Spatial distribution of Federal fishery participants in EEZ
- Harvests and harvest rates on stocks given both Federal and State fisheries
- Less flexible Federal management
- Social and economic considerations (EA/RIR Analysis)
 - Impacts to subsistence, personal use, sport, and commercial fishers, associated businesses, and communities
 - Opportunities for other salmon users



APPROACH TO SETTING A TAC

- TAC must be less than or equal to ABC recommended by SSC
- Consider a % buffer from ABC to account for management uncertainty and other users
 - For example, a 5% to 15% reduction from ABC, or another value



ACTION

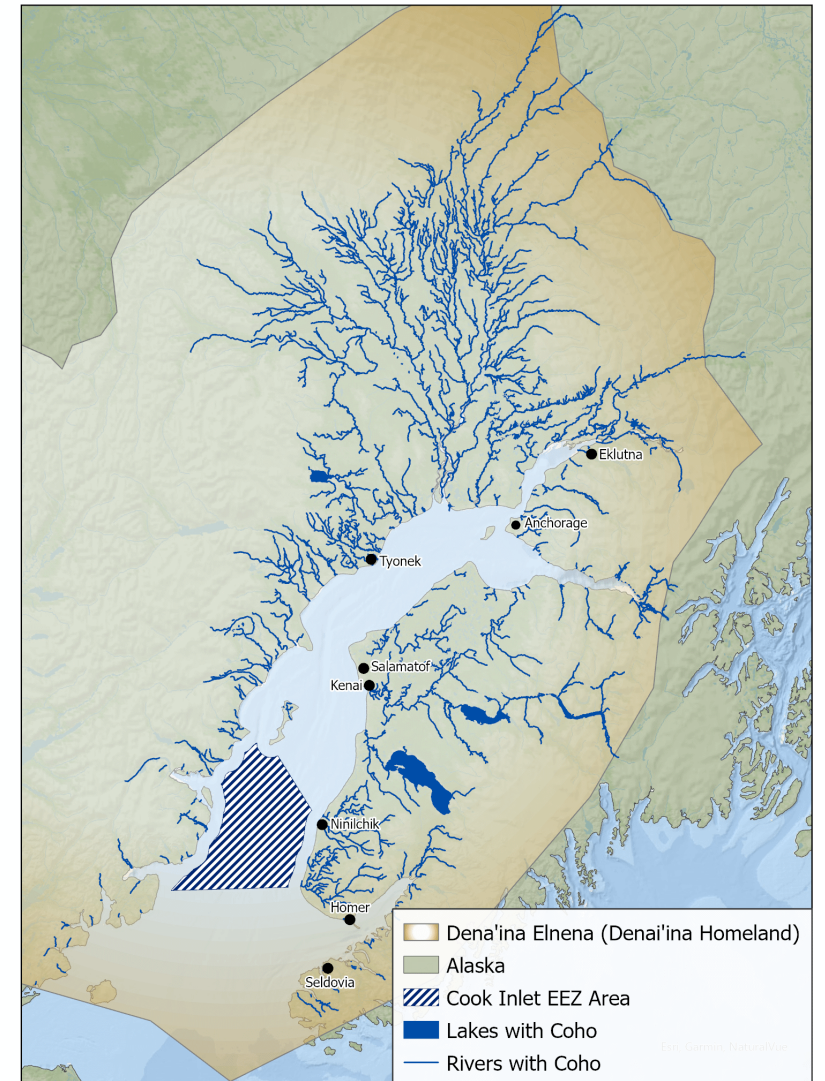
SSC Recommendations						AP
Stock	Tier	MSST	Preseason OFL	ABC buffer	ABC=ACL	TAC
Kenai River Late-Run sockeye salmon	1	3,030,000	901,932	0.478	431,123	
Kasilof River sockeye salmon	1	555,000	541,084	0.694	375,512	
Aggregate Other sockeye salmon	3	163,000	887,464	0.200	177,493	
Aggregate Chinook salmon	3	44,200	2,697	0.10	270	
Aggregate coho salmon	3	38,800	357,688	0.100	35,769	
Aggregate chum salmon	3	NA	441,727	0.25	110,432	
Aggregate pink salmon	3	NA	270,435	0.5	135,218	



COOK INLET SALMON: 2024 HARVEST SPECIFICATIONS



THANK YOU



A. Jahn

FIGURE 4-12. AVERAGE CUMULATIVE LANDINGS IN THE EEZ (2013 TO 2021) BY SEASON DAY AS A PERCENTAGE OF TOTAL EEZ LANDINGS. (PG. 230)

- Figure 4-12 (above) only includes harvests in the EEZ. It is similar to Figure 4-1 (below) which includes all harvests in the UCI.
- In an average year milestone percentages are realized a few days sooner in the EEZ than in the UCI fishery as a whole
 - 75% of EEZ Chinook are taken by July 14th v. July 17th in all waters
 - 75% of EEZ Sockeye are taken by July 20th v. July 22nd in all waters
 - 75% of EEZ Pink are taken by July 21st v. July 25th in all waters
 - 75% of EEZ Chum are taken by July 27th v. July 26th in all waters
 - 75% of EEZ Coho are taken by Aug 3rd v. Aug 4th in all waters

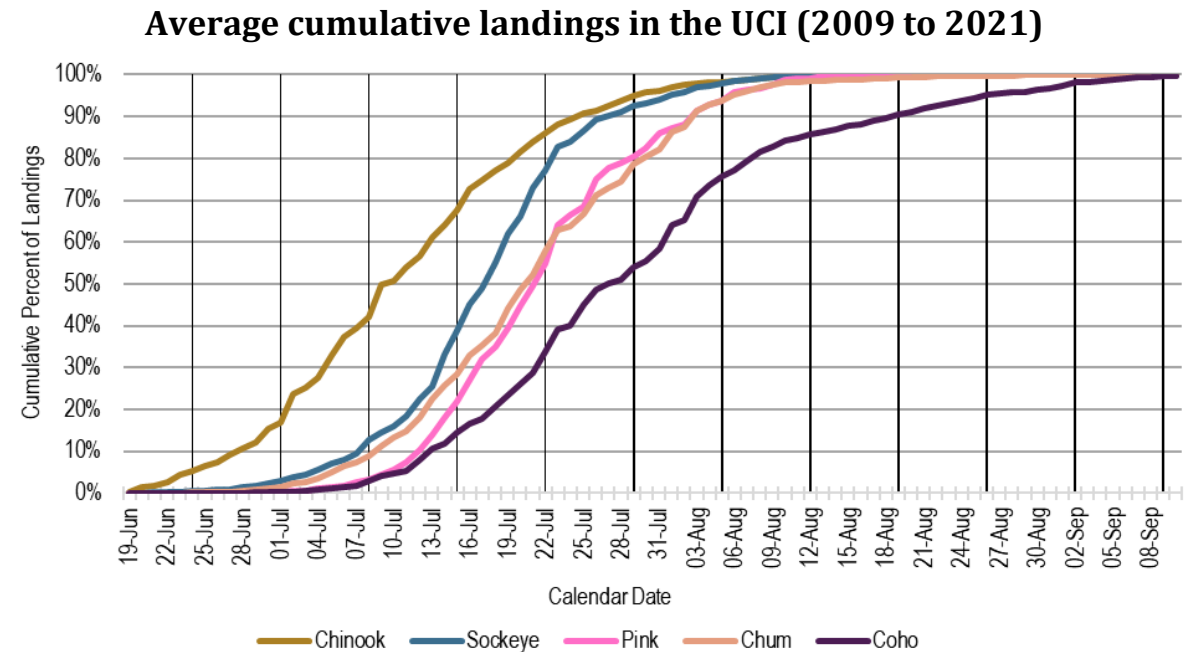
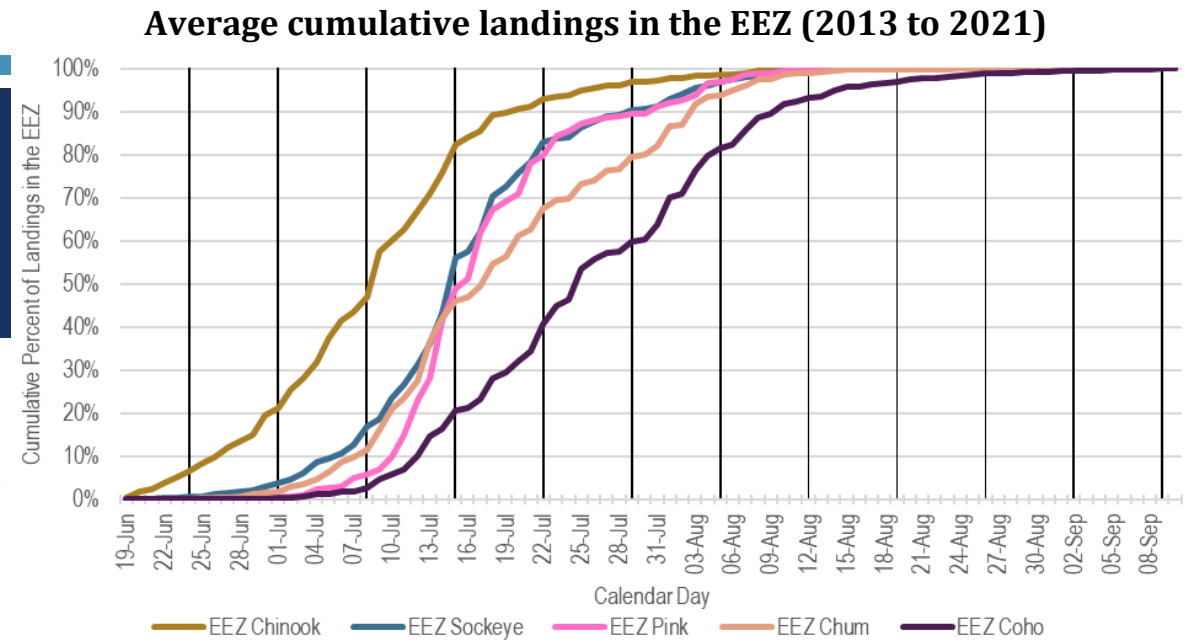


FIGURE 4-I. AVERAGE HARVEST PERCENTAGES IN THE UCI SALMON DRIFT GILLNET FISHERY BY DATE AND SPECIES, 2009–2021 (PG. 216)

- Vertical lines show weekly intervals — June 25, July 1, July 8, July 15, etc.
- On average by July 15:
 - 68% of Chinook harvested
 - 39% of Sockeye harvested
 - 28% of Chum harvested
 - 22% of Pinks harvested
 - 14% of Coho harvested

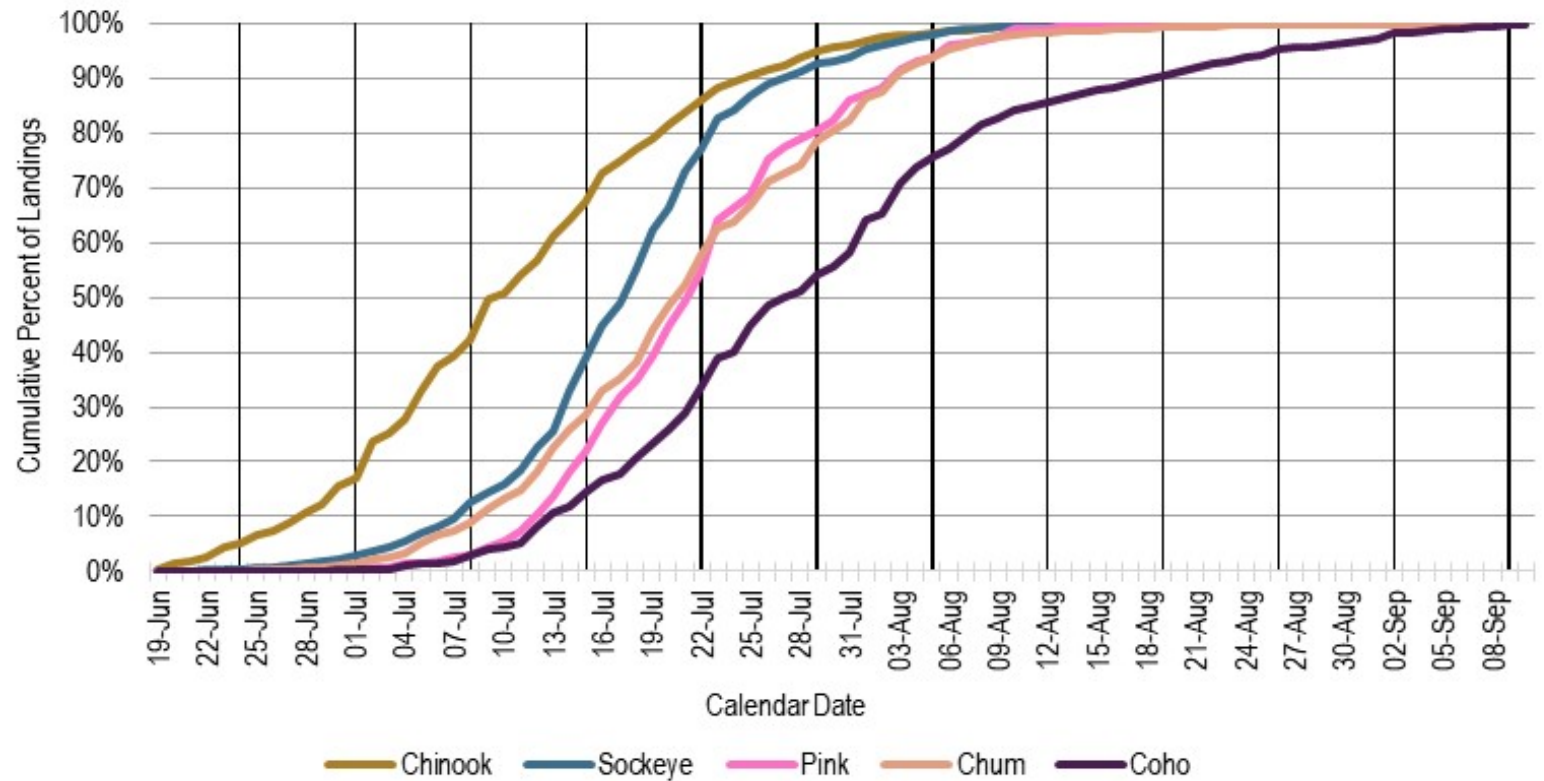


FIGURE 4-5. HARVEST (IN NUMBERS OF FISH) IN THE UCI SALMON DRIFT GILLNET FISHERY BY SPECIES, 1966–2021. (PG. 223)

- 3 years don't indicate a trend
- 2020 appears to be an anomaly
 - 2020 had the lowest total harvest (651,610 fish)
 - 2020 had the highest percentage of pinks (45%)
 - 2020 had the lowest percentage of sockeye harvest (44%) since 1981 (38%).
- 2019 and 2021 were more typical with respect to species mix

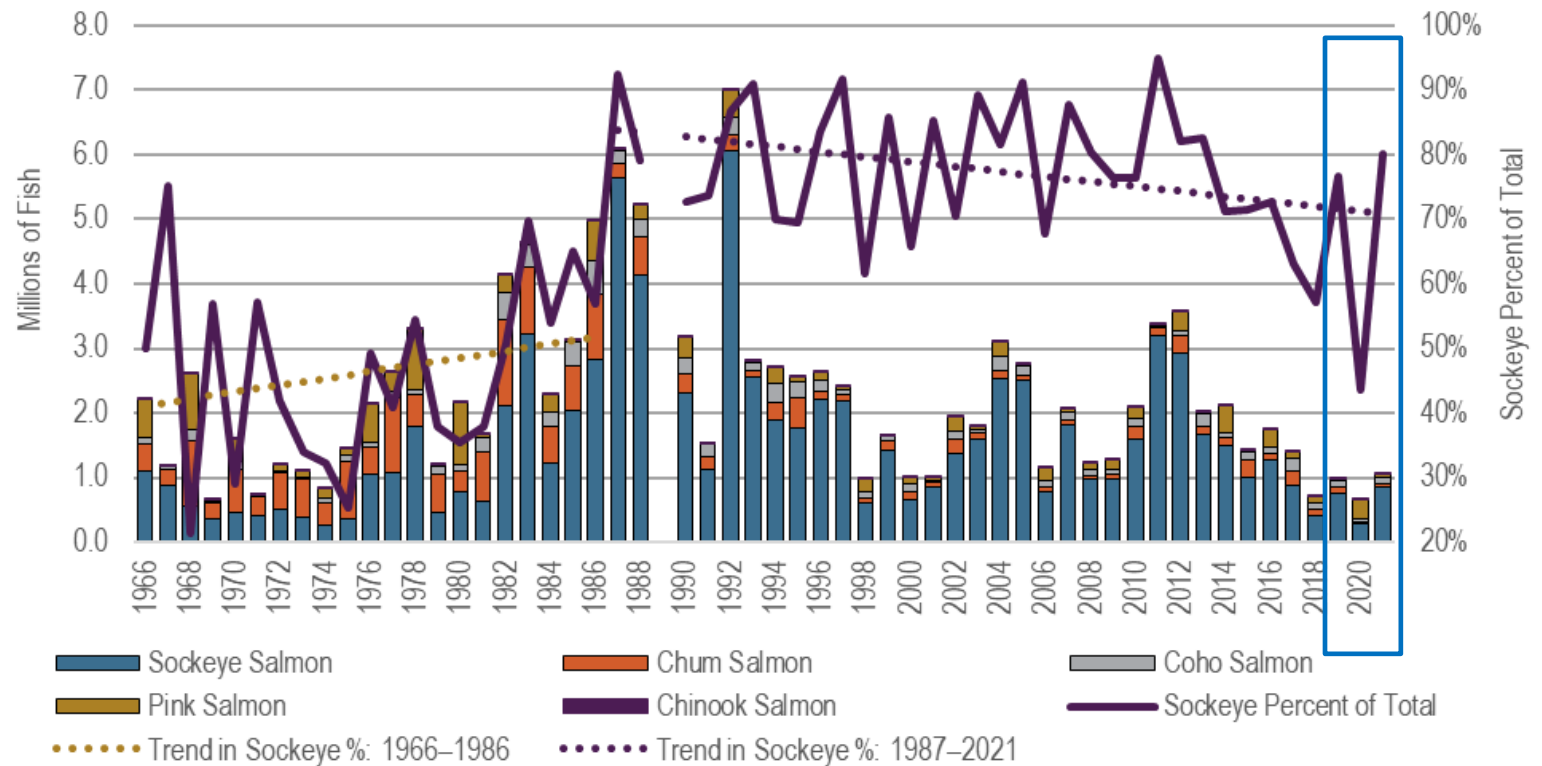
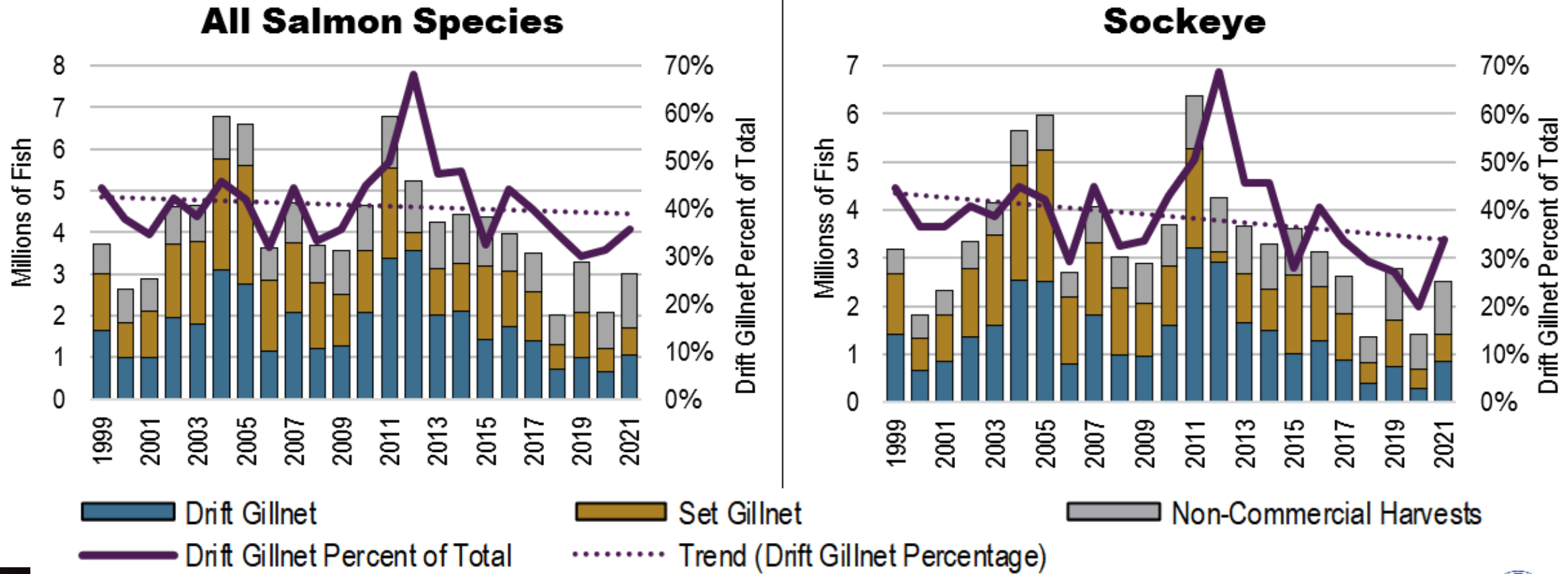


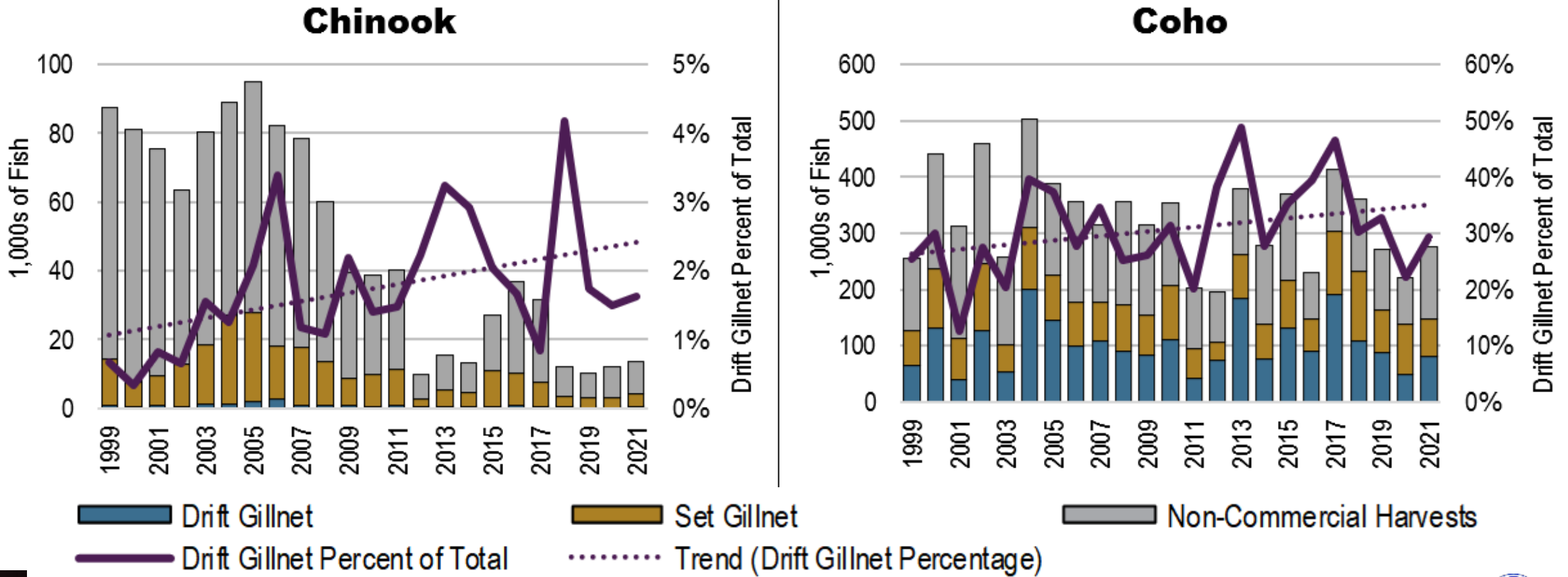
FIGURE 4-6. SALMON HARVEST (IN NUMBERS OF FISH) IN UPPER COOK INLET BY FISHERY AND SPECIES, 1990-2021 (PG. 224)



Note: Non-commercial salmon fisheries include the sport, personal use, and subsistence/educational fisheries in both salt and fresh water north of the Anchor Point line.



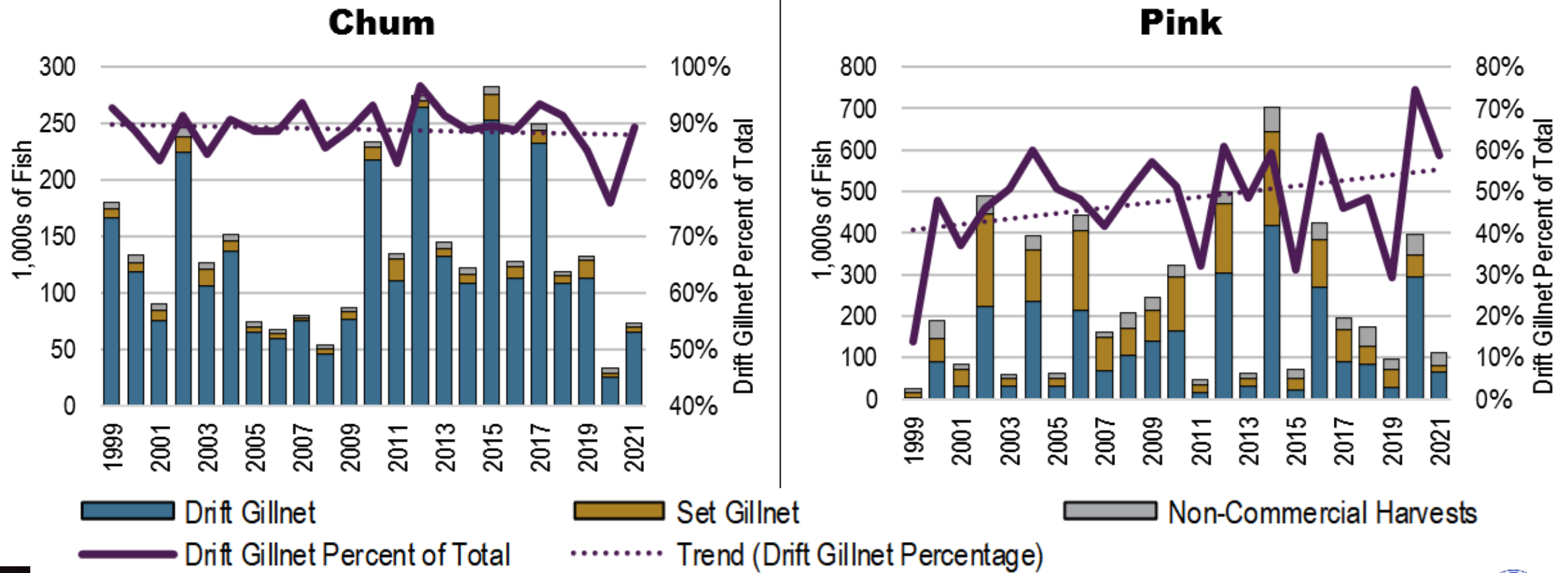
FIGURE 4-6. SALMON HARVEST (IN NUMBERS OF FISH) IN UPPER COOK INLET BY FISHERY AND SPECIES, 1990-2021 (CONTINUED)



Note: Non-commercial salmon fisheries include the sport, personal use, and subsistence/educational fisheries in both salt and fresh water north of the Anchor Point line.



FIGURE 4-6. SALMON HARVEST (IN NUMBERS OF FISH) IN UPPER COOK INLET BY FISHERY AND SPECIES, 1990-2021 (CONTINUED)



Note: Non-commercial salmon fisheries include the sport, personal use, and subsistence/educational fisheries in both salt and fresh water north of the Anchor Point line.



UCI DRIFT GILLNET MANAGEMENT AREA DO NOT MATCH NEATLY TO THE BOUNDARIES OF THE EEZ

- See Figure 1-2 on page 35, Figure 4-3 on page 220, and Figure 4-4 on page 221. See also Figure 4-35 on page 258

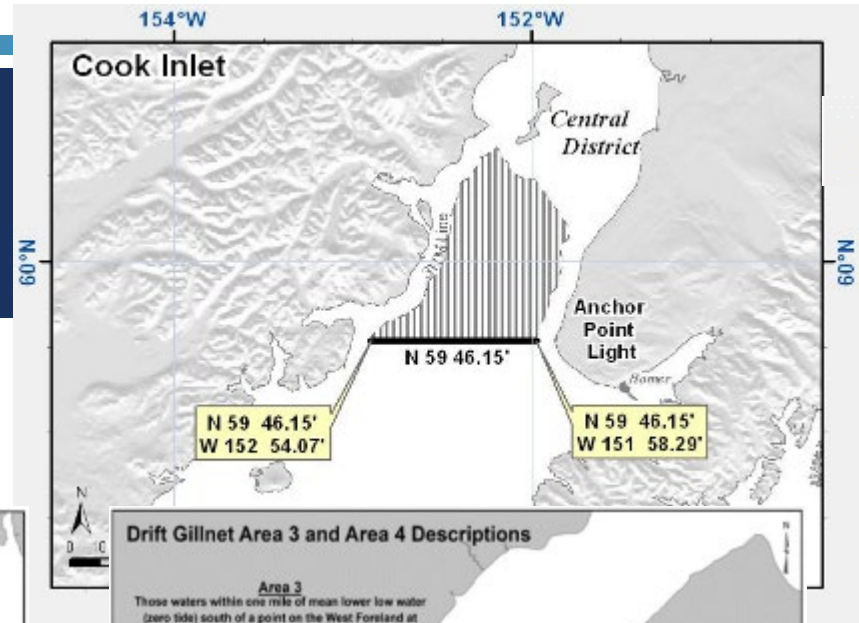
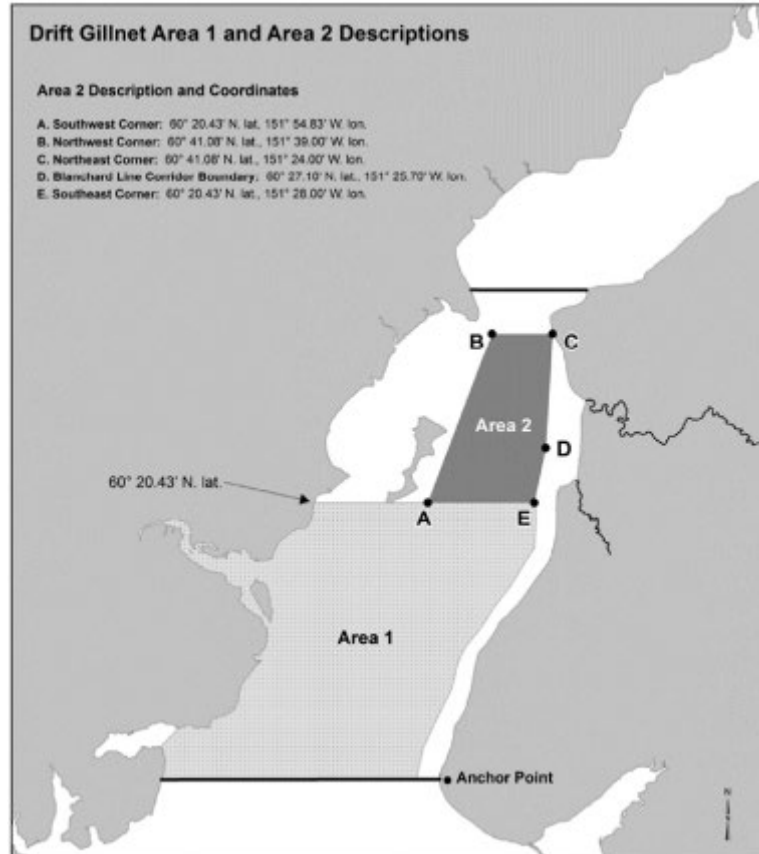
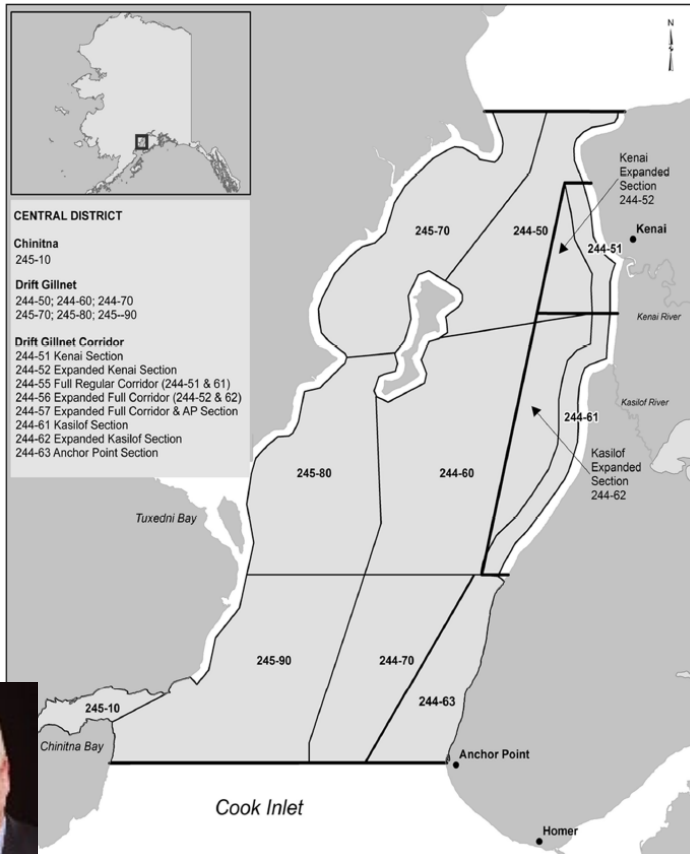


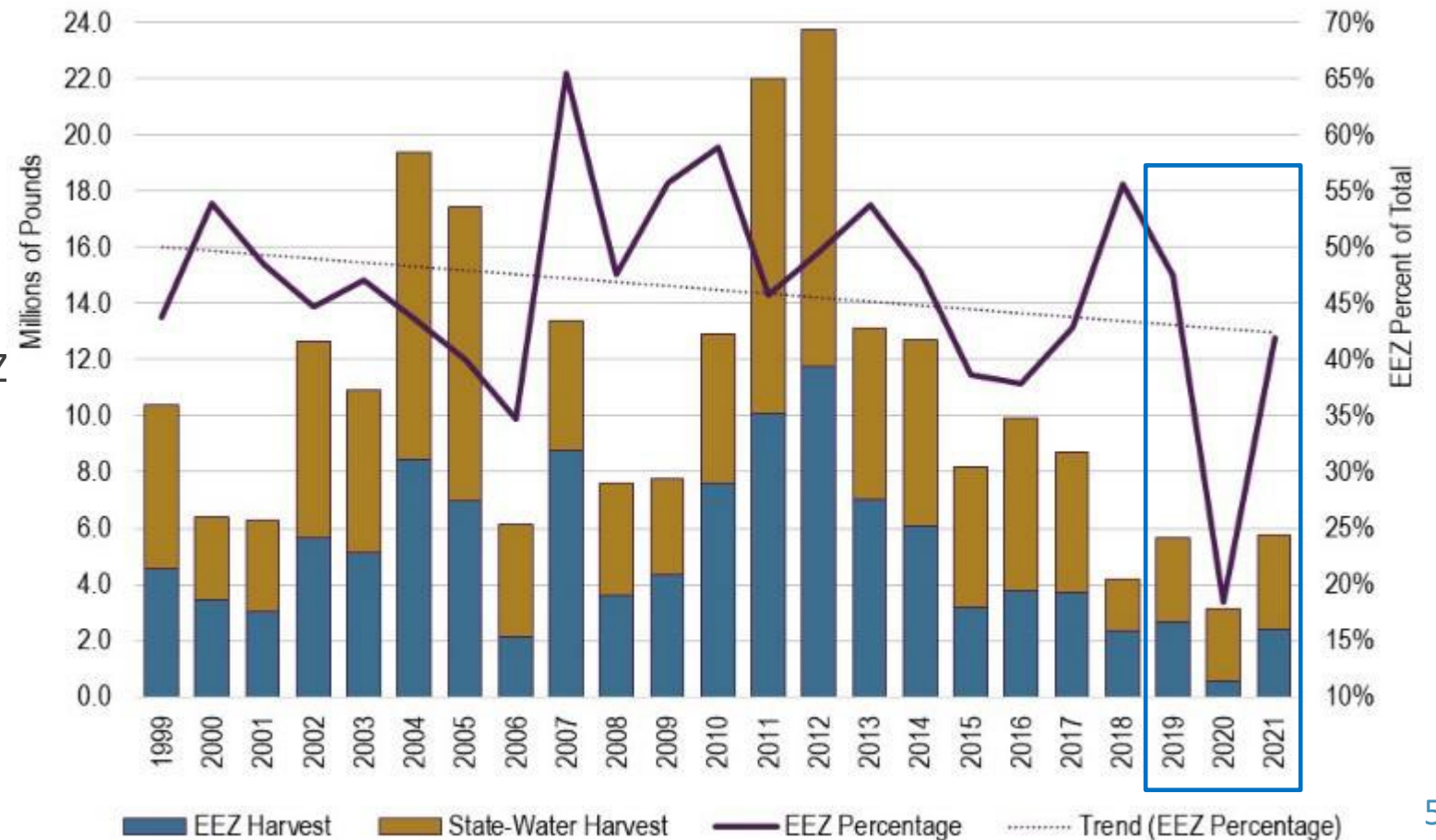
TABLE 4-4. ASSUMED PERCENT OF THE UCI SALMON DRIFT GILLNET FISHERY HARVEST IN STATE WATERS VERSUS THE EEZ BY STATISTICAL AREA. (PG. 226)

Statistical Area	Name/Description	Locale Code	State Water Percent	EEZ Percent
24426	Kasilof Special Harvest Area	All	100%	0%
24451	Kenai Section	All	100%	0%
24455	Full Corridor	All	100%	0%
24456	Expanded Full Corridor	All	100%	0%
24457	Expanded Kenai/Kasilof & Anchor Point Section	0	94%	6%
		1	25%	75%
24460 (District Wide)	All areas available	0	50%	50%
	Fishing Limited to Drift Area 1	1	25%	75%
	Fishing Limited to Drift Area 3	3	100%	0%
	Fishing Limited to the Drift Areas 3 & 4	4	75%	25%
	Fishing Limited to Drift Areas 1 & 2	5	50%	50%
24461	Kasilof Section	All	100%	0%
24510	Chinitna Bay	All	100%	0%



FIGURE 4-9. APPROXIMATE PERCENT OF TOTAL SALMON HARVESTS (IN POUNDS) IN THE UCI SALMON DRIFT GILLNET FISHERY INSIDE THE EEZ, 1999–2021. (PG. 227)

- EEZ splits are approximated based on percentage estimates in Table 4-4.
- Blue outline shows the updated data.
 - EEZ Percentage 2020 was the lowest recorded (18.5%)
- Overall percentage harvested in the EEZ has been declining since 1999.
 - Average since 1999 = 47.2%
 - Average 2007–2014 = 52.4%
 - Average since 2015 = 41.0%
 - Average since 2019 = 39.1%



Thank you



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