

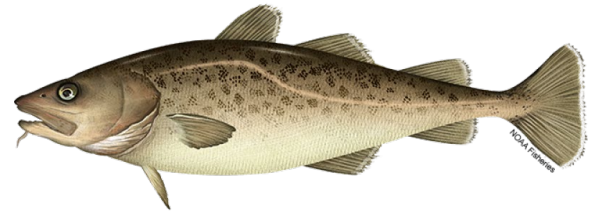
RC4

Pacific cod: Federal Stock Assessment and Management

Diana Stram (NPFMC) and Sara Cleaver (NPFMC)

Board of Fish Meeting

October 30, 2025



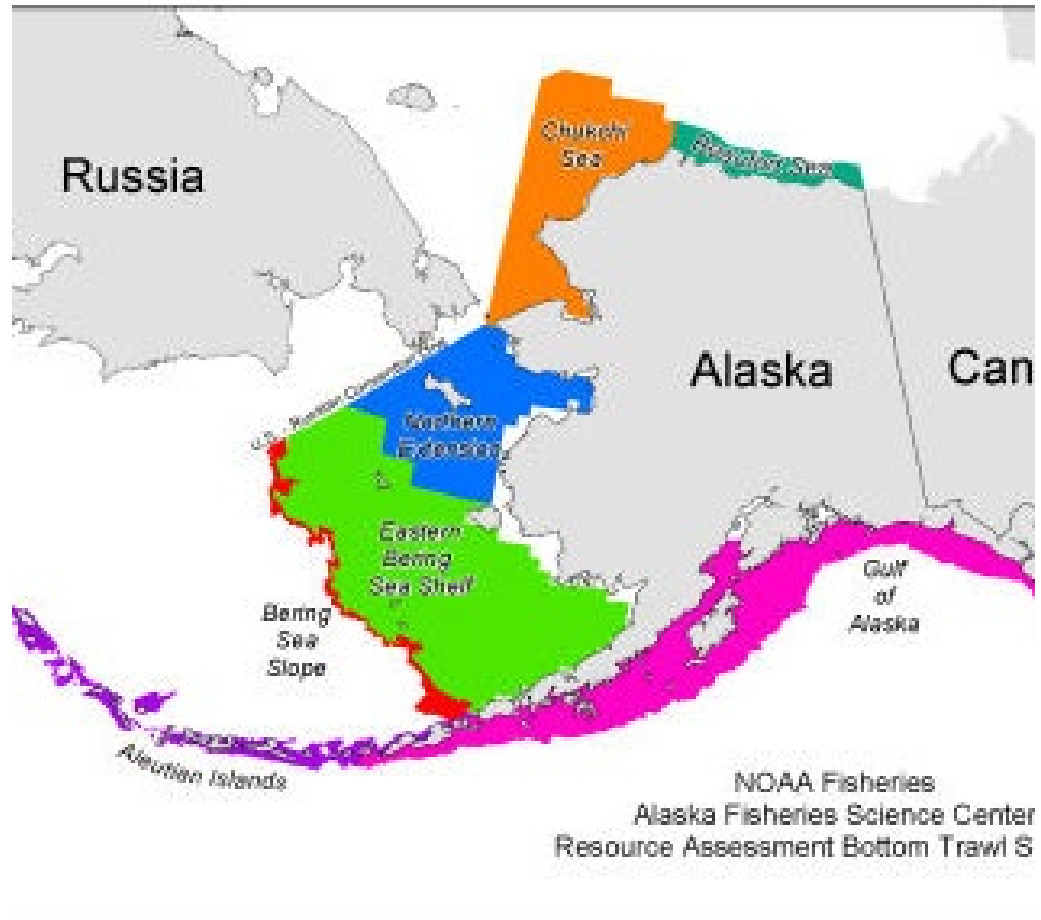
OUTLINE

- Process for setting OFLs & ABCs
- Stock status: BS, AI & GOA
- WGOA Pacific cod: Federal management & fishery participation
- Pacific cod movement research updates

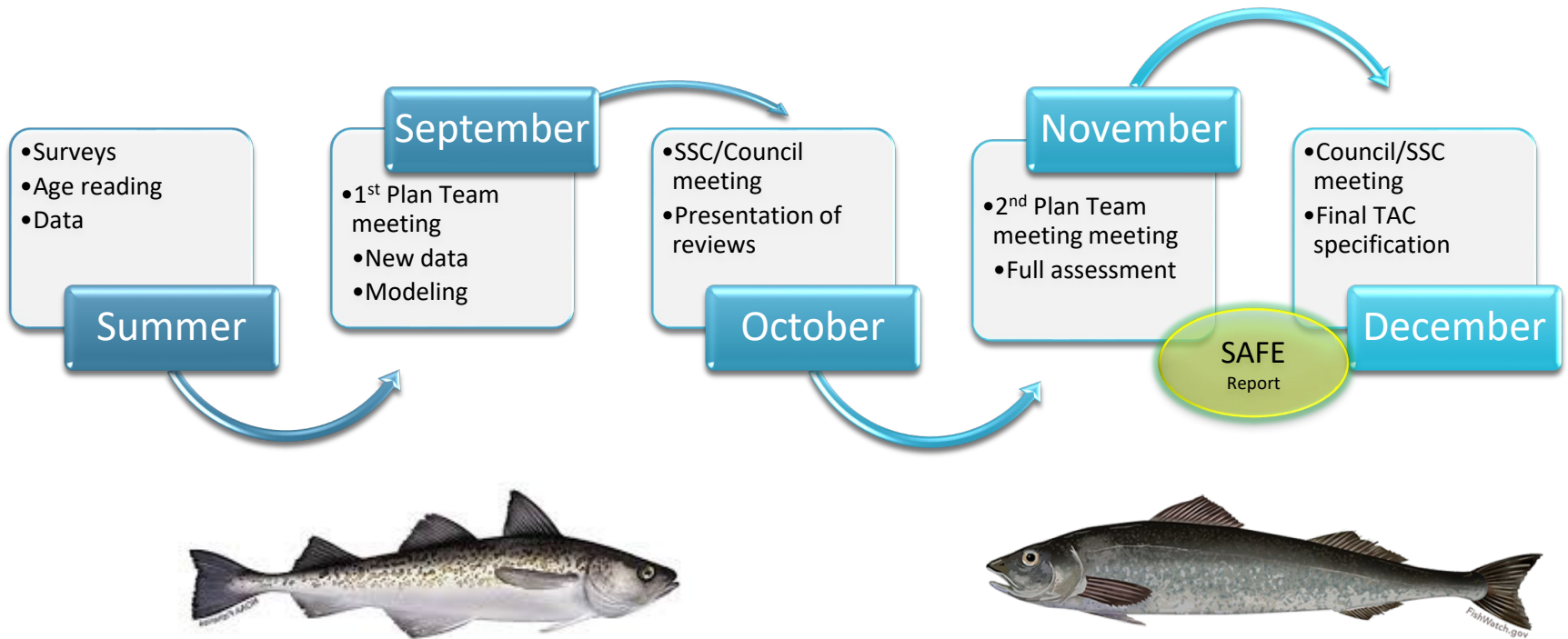


3 MANAGED STOCKS

- Bering Sea
- Aleutian Islands
- Gulf of Alaska

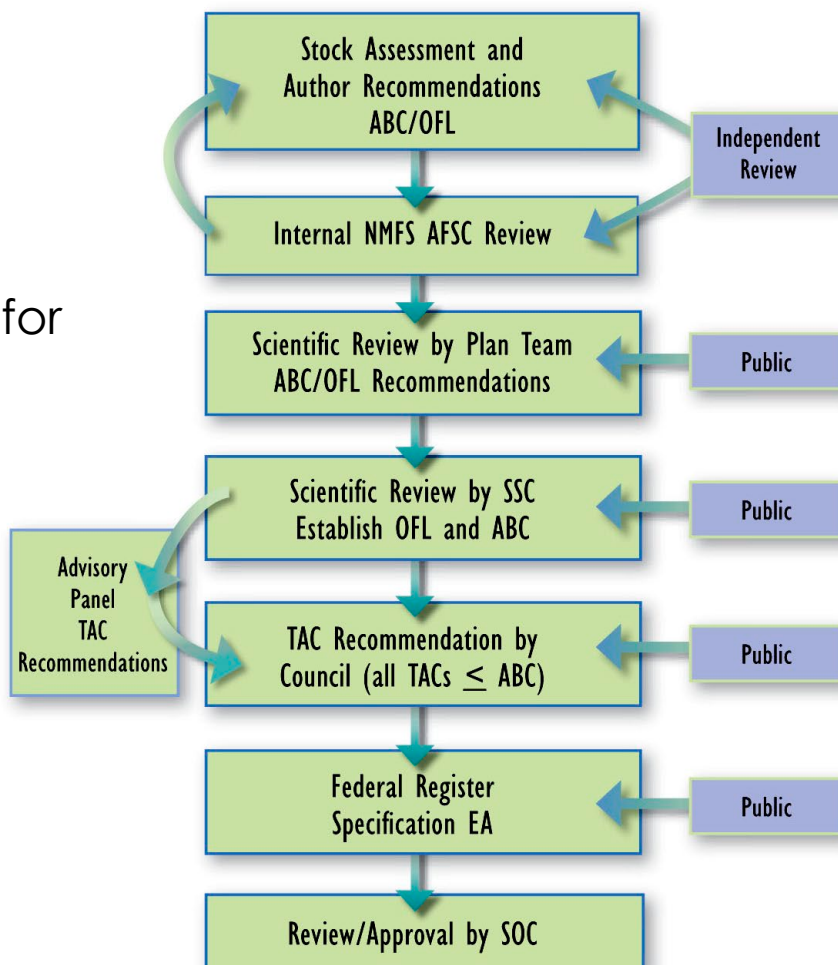


Annual Groundfish Stock Assessment Cycle





Scientific Review Process for North Pacific Stock Assessments and Catch Specifications



November-December for Groundfish

Groundfish Stock Assessments in the Council Process

December 2022

GOA Pacific cod

Chapter 2: Assessment of the Pacific cod stock in the Gulf of Alaska

Peter-John F. Hulson, Steven J. Barbeaux, Bridget Ferriss, Susanne McDermott, and Ingrid Spies

November 2022



Establishing catch limits

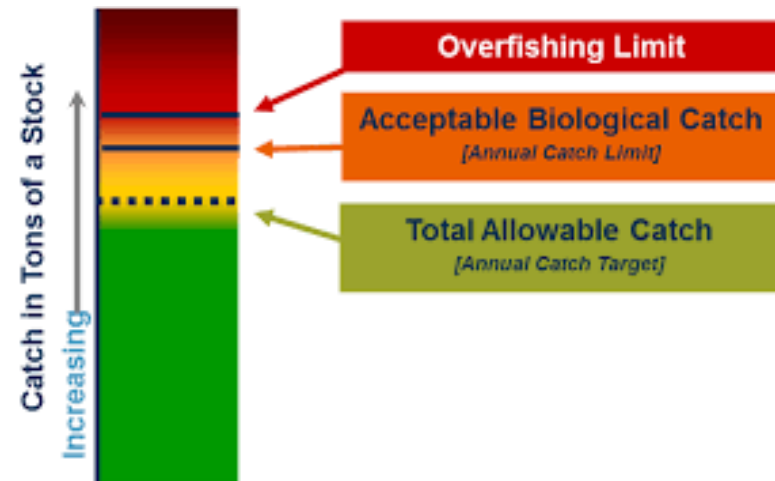
In the North Pacific, annual catch limits are specified where:

$$\text{TAC} \leq \text{ABC} < \text{OFL}$$

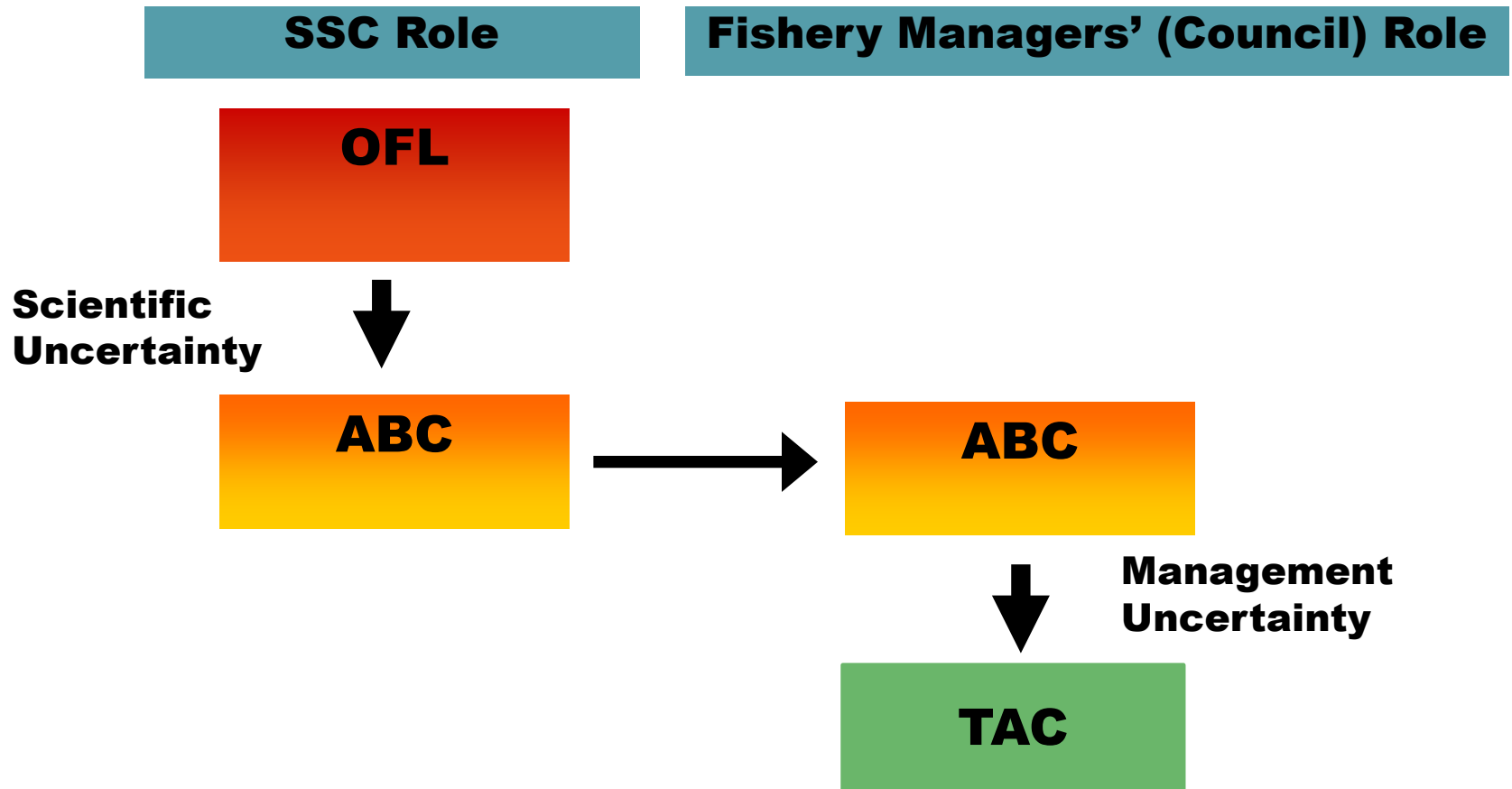
OFL (overfishing limit) is harvest limit associated with maximum sustainable yield (MSY). [SSC]

ABC (acceptable biological catch) is the harvest limit that takes into account uncertainties in the assessment process (scientific uncertainty). [SSC]

TAC (total allowable catch) is the target that includes socioeconomic considerations and accounts for management uncertainty. [Council for groundfish; State of Alaska for crab]



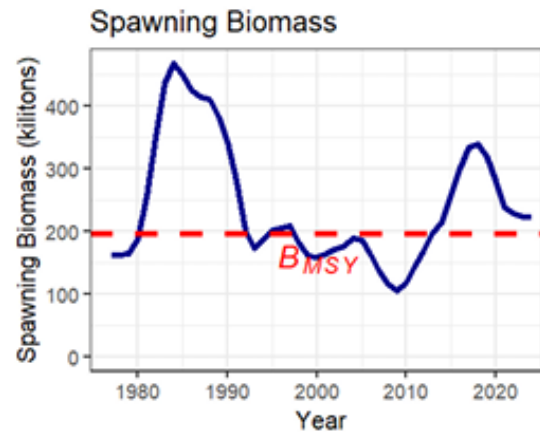
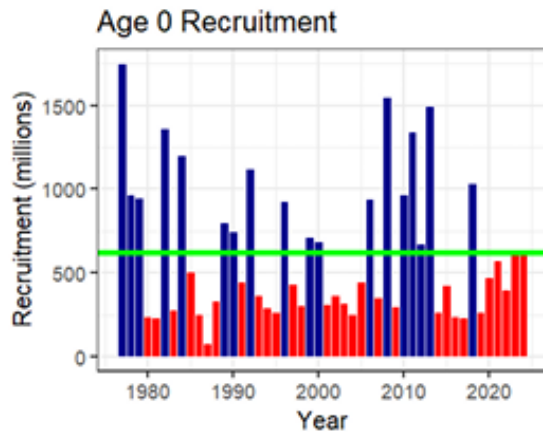
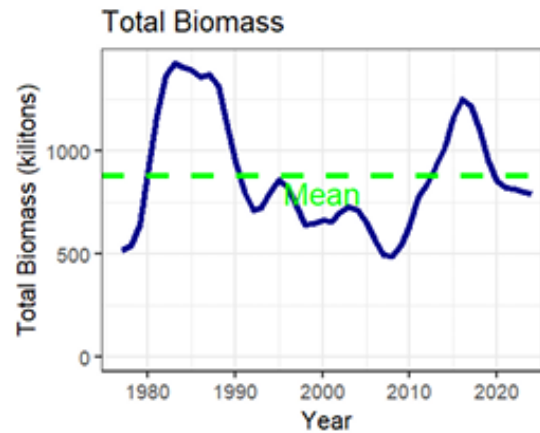
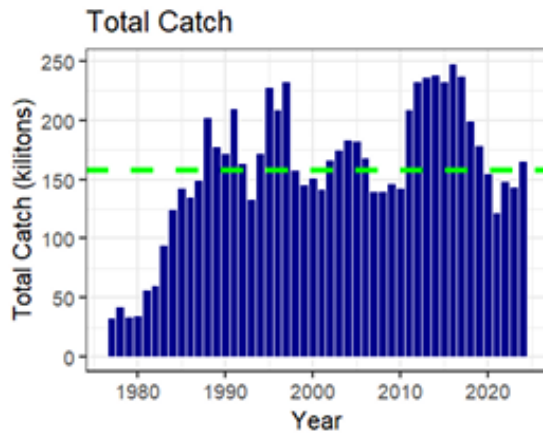
Uncertainty in Setting Catch Limits



OUTLINE

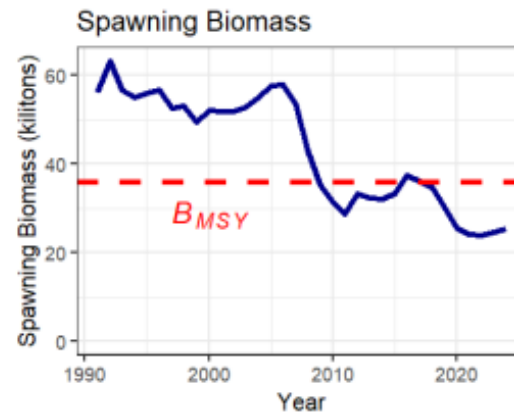
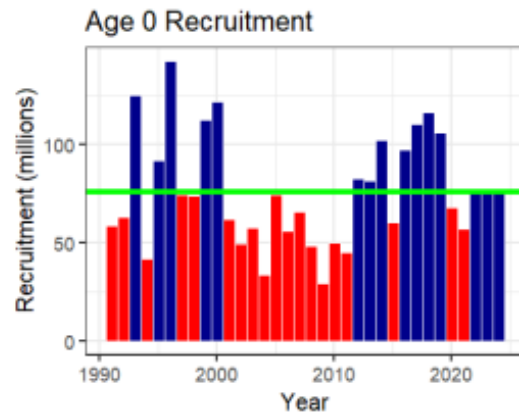
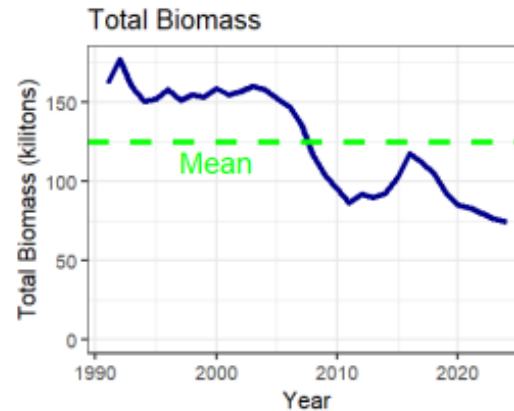
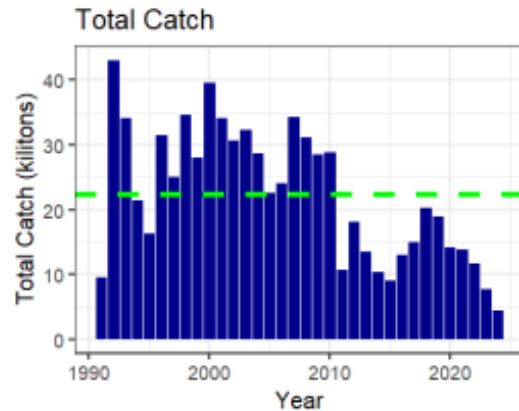
- Process for setting OFLs & ABCs
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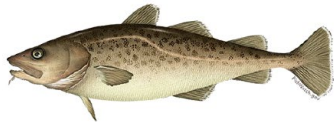


EBS COD STOCK STATUS

AI COD STOCK STATUS



GOA Pacific Cod Assessment, 2024

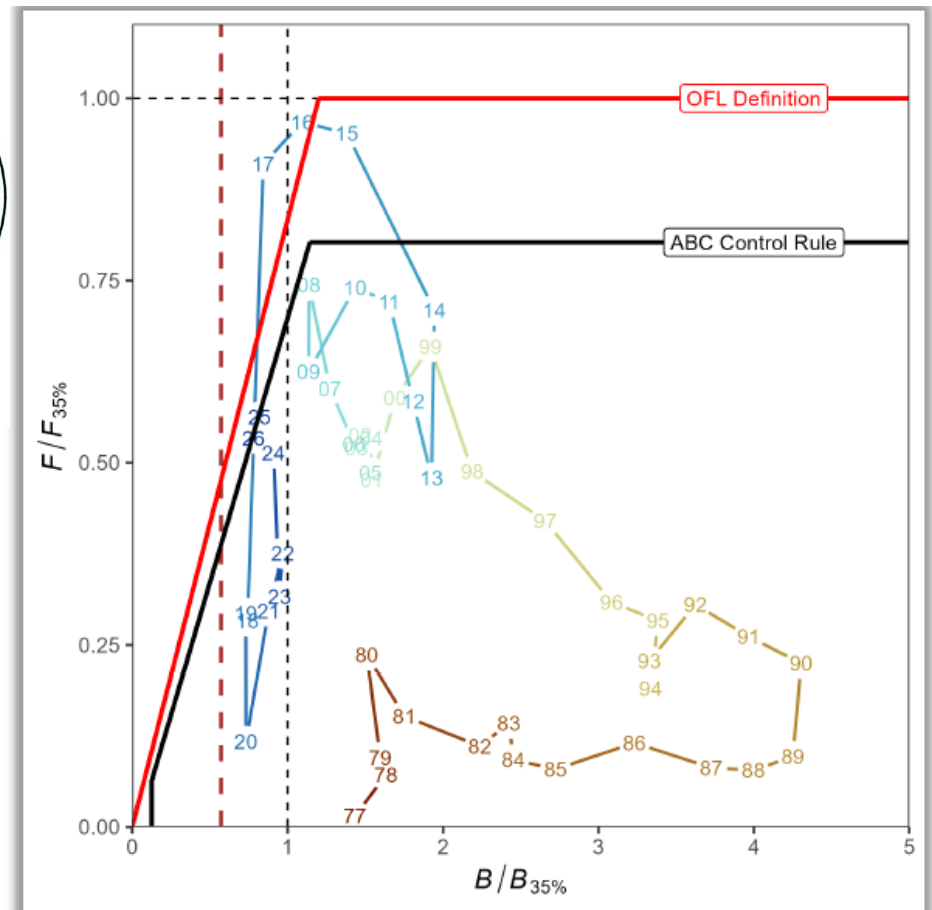


GOA PACIFIC COD

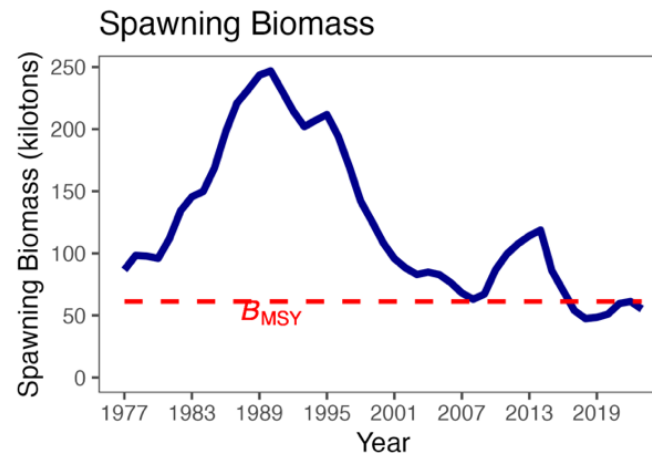
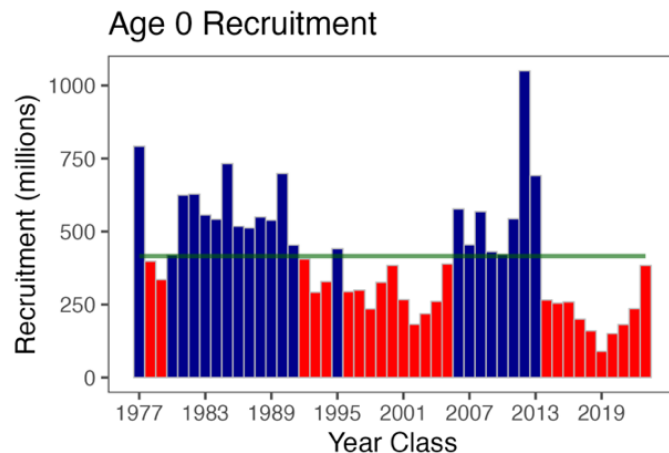
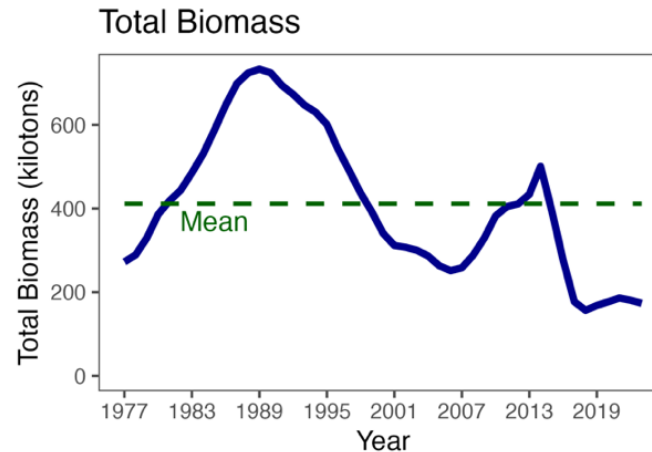
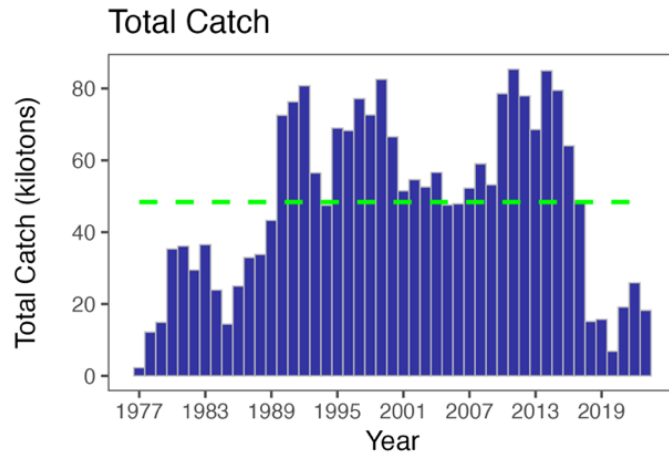
P. HULSON, S. BARBEAUX, B. FERRISS, K. ECHAVE, J. NIELSEN, S. MCDERMOTT,
B. LAUREL, A. ABOOKIRE, INGRID SPIES, AND S. K. SHOTWELL



- Estimated to be above $B_{20\%}$ (dashed red line),
2025 = $B_{28.7\%}$



GOA Pacific Cod Assessment, 2024

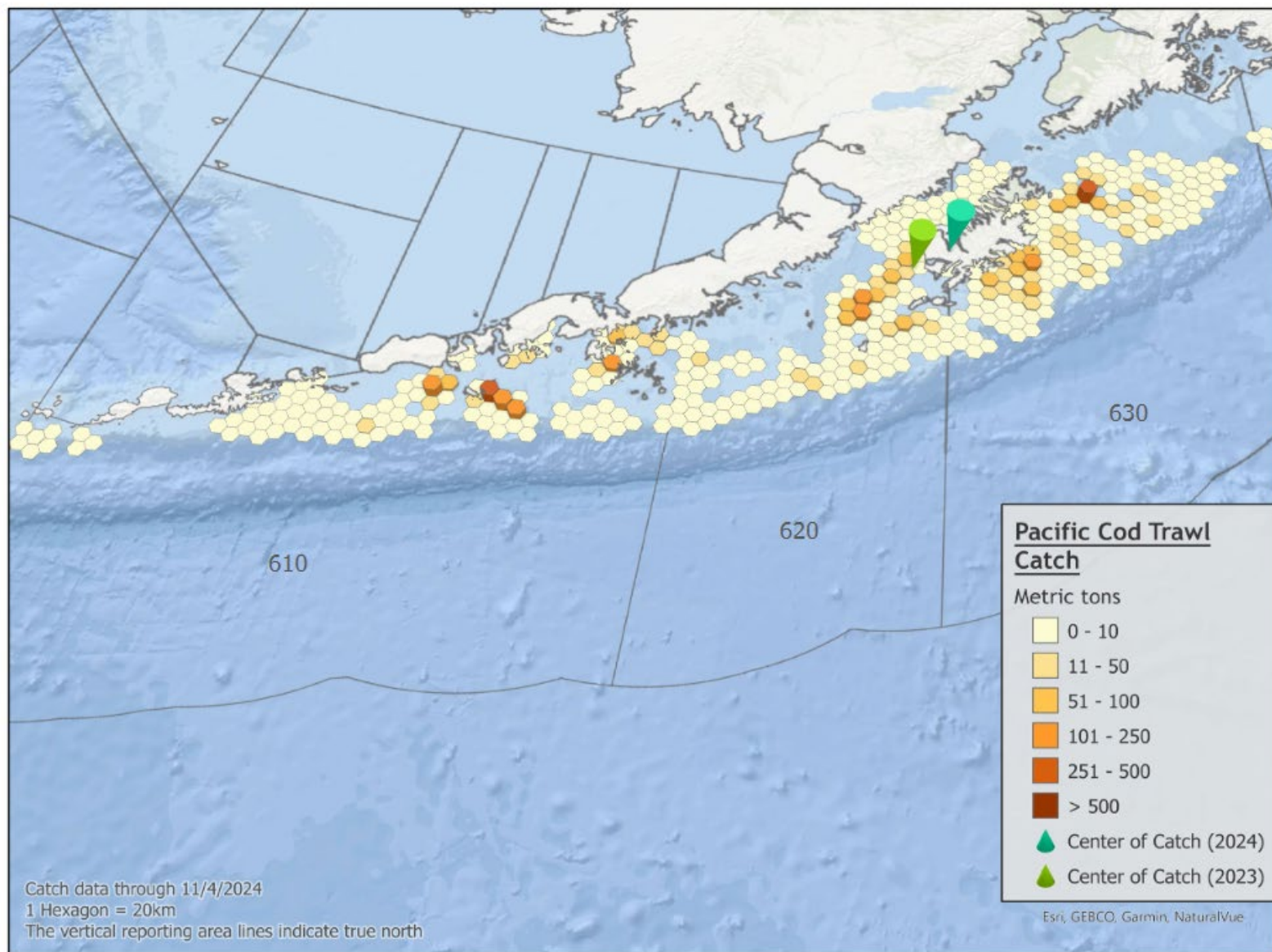


OUTLINE

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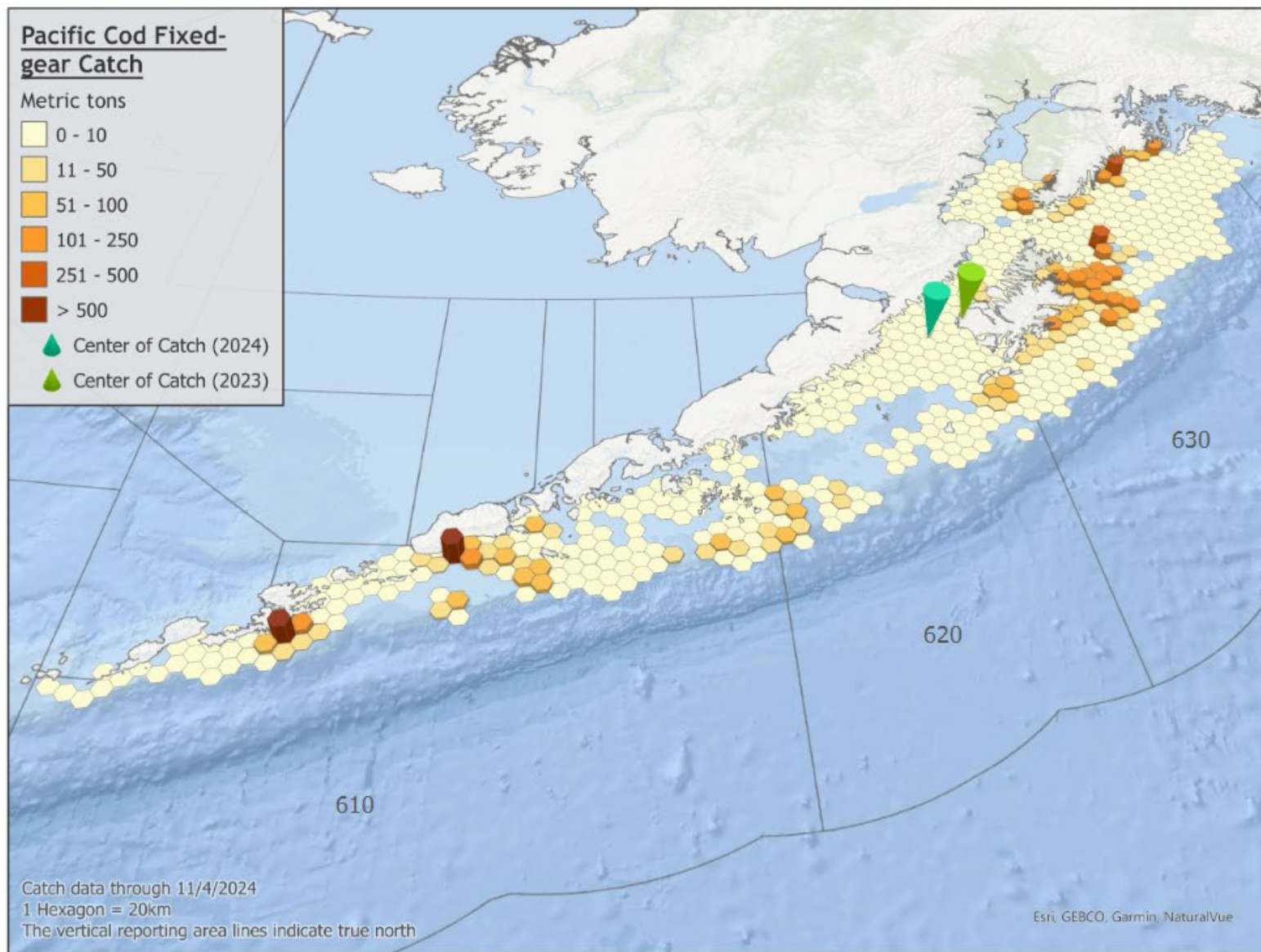


2024 Gulf of Alaska Pacific Cod Catch by Trawl Gear

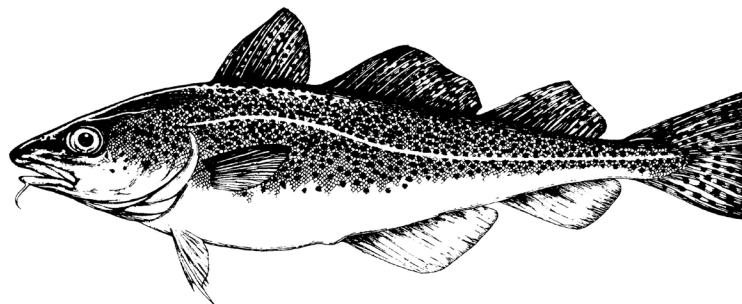


From NMFS Inseason Management Report, December 2024

2024 Gulf of Alaska Pacific Cod Catch by Non-Trawl Gear



From NMFS Inseason Management Report, December 2024



Final 2025 GOA Pacific cod ABCs, TACs, and State GHLs (mt)

Specifications	Western	Central	Eastern	Total
ABC	8,710	20,506	2,925	32,141
State GHL	2,613	5,127	731	8,471
(%)	30%	25%	25%	
Federal TAC	6,097	15,379	2,194	23,670

Note: The Federal TAC is designated for Federal fisheries only and does not include the State GHL.



Final 2025 Seasonal Apportionments and Allocation of Pacific Cod TAC Amounts in the GOA; Allocations in the Western GOA

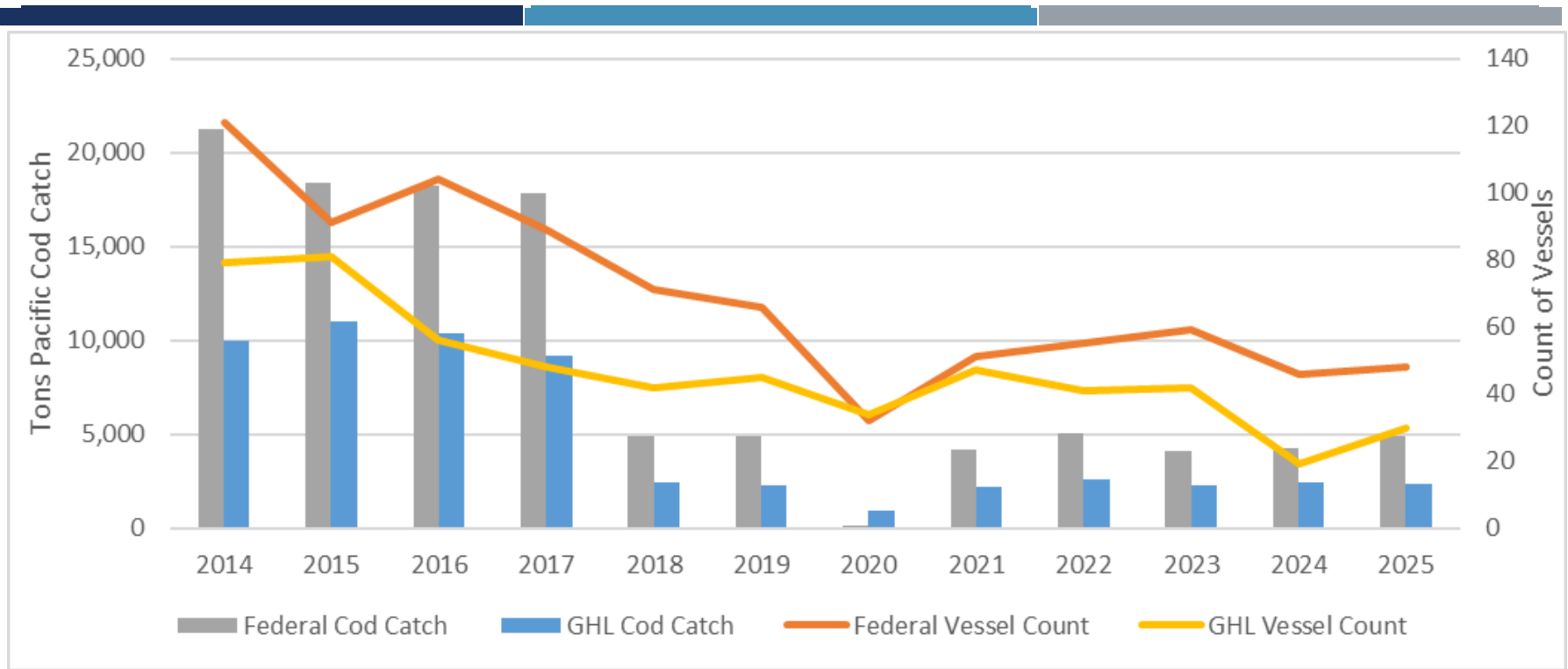
PUBLISHED DOCUMENT: 2025-04371 (90 FR 12468)

Table 5—Final 2025 Seasonal Apportionments and Allocation of Pacific Cod Total Allowable Catch (TAC) Amounts in the GOA; Allocations in the Western GOA and Central GOA Sectors, and the Eastern GOA Inshore and Offshore Processing Components
[Values are rounded to the nearest metric ton]

Regulatory area and sector	Annual allocation (mt)	A Season		B Season	
		Sector percentage of annual non-jig TAC	Seasonal allowances (mt)	Sector percentage of annual non-jig TAC	Seasonal allowances (mt)
Western GOA:					
Jig (3.5% of TAC)	213	n/a	128	n/a	85
Hook-and-line CV	82	0.7	41	0.7	41
Hook-and-line CP	1,165	10.9	641	8.90	524
Trawl CV	2,260	31.54	1,856	6.86	404
Trawl CP	141	0.9	53	1.5	88
All Pot CV and Pot CP	2,236	19.8	1,165	18.2	1,071
Total	6,097	63.84	3,884	36.16	2,213

In regulation at
50 CFR 679.20(a)(12)



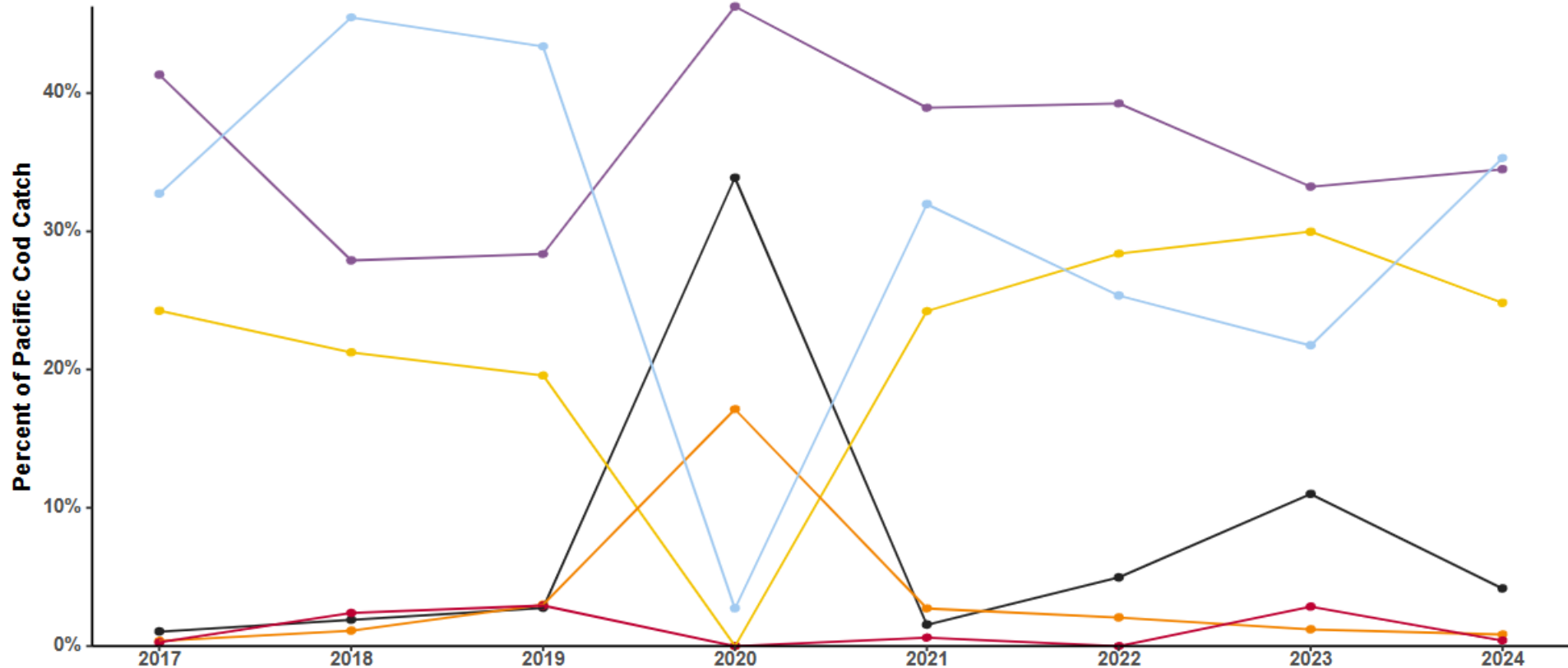


WGOA Pacific cod catch and vessel counts

Western GOA Pacific Cod Catch by Sector

—●— HAL (CV) —●— Trawl (CV) —●— Pot
—●— HAL (CP) —●— Trawl (CP) —●— Jig

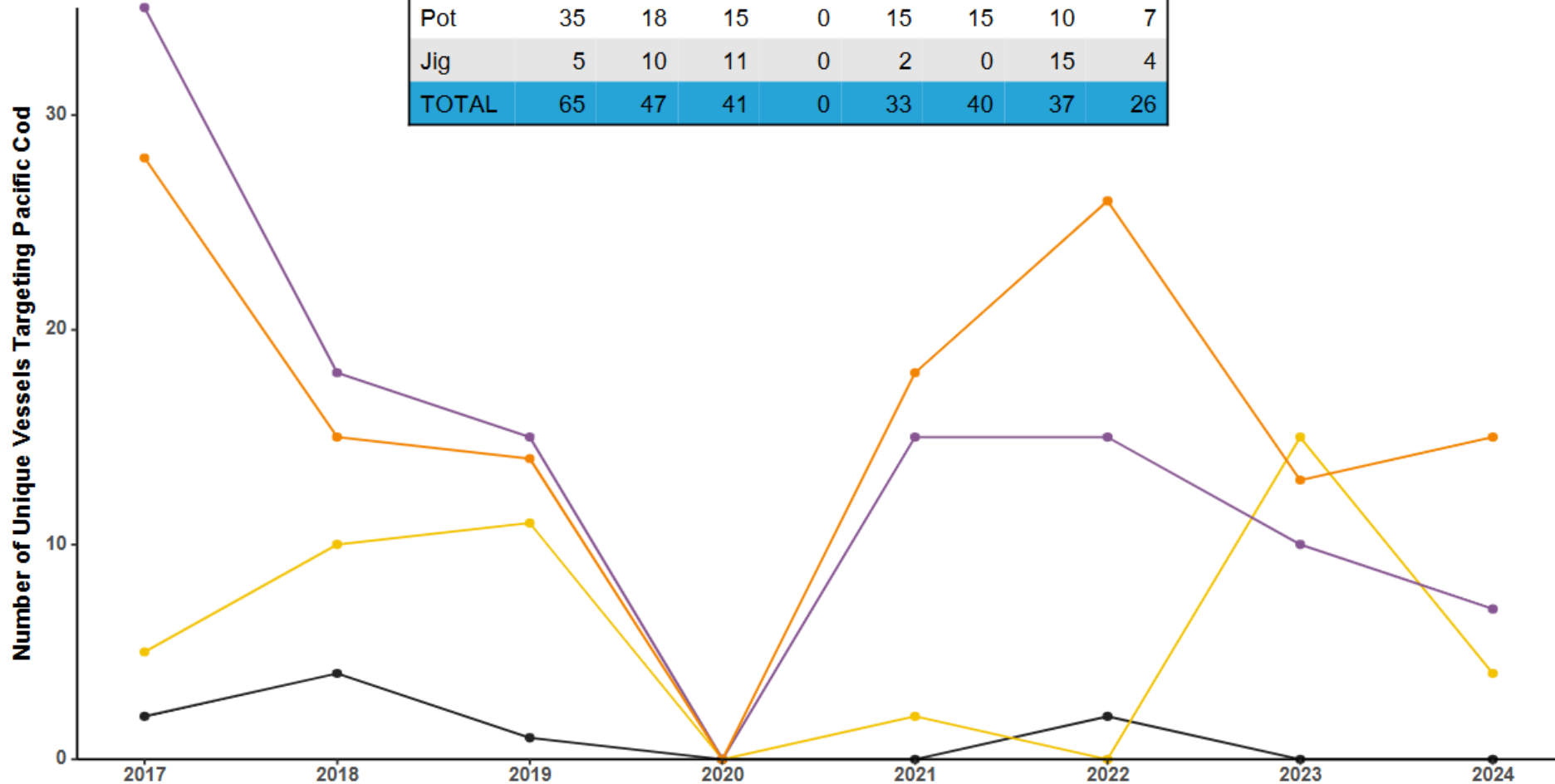
Sector	2017	2018	2019	2020	2021	2022	2023	2024
HAL (CV)	1%	2%	3%	34%	2%	5%	11%	4%
HAL (CP)	24%	21%	20%	0%	24%	28%	30%	25%
Trawl (CV)	41%	28%	28%	46%	39%	39%	33%	34%
Trawl (CP)	0%	1%	3%	17%	3%	2%	1%	1%
Pot	33%	45%	43%	3%	32%	25%	22%	35%
Jig	0%	2%	3%	0%	1%	0%	3%	0%



Counts of Catcher Vessels Targeting Western GOA Pacific Cod

Gear — HAL — JIG — POT — TRW

Gear	2017	2018	2019	2020	2021	2022	2023	2024
HAL	2	4	1	0	0	2	0	0
Trawl	28	15	14	0	18	26	13	15
Pot	35	18	15	0	15	15	10	7
Jig	5	10	11	0	2	0	15	4
TOTAL	65	47	41	0	33	40	37	26



% Harvested: WGOA

Pacific cod - Western GOA

Sector	2025				2024			
	Annual allocation	Catch Sept 20	Closed	% Taken	Annual allocation	Catch Sept 21	Closed	% Taken
Hook-and-line CP	1,165	659	na	57%	1,170	833	na	71%
Hook-and-line CV	82	45	Jan 1	55%	83	167	Jan 1	201%
Jig	213	89	na	42%	214	17	na	8%
Pot CV/CP	2,236	1,418	na	63%	2,245	1,264	na	56%
Trawl CV	2,260	1,919	na	85%	2,268	1,340	na	59%
Trawl CP	141	34	Jan 20	24%	142	36	Jan 20	25%
Total	6,097	4,164		68%	6,121	3,657		60%

¹Includes reallocations. See information bulletins at <https://www.fisheries.noaa.gov/alaska/sustainable-fisheries/alaska-groundfish-fisheries-management>



WGOA Pacific cod:

2024 summary data (federal fisheries)

- 46 vessels participated
 - Ex-vessel value of \$2.5M, wholesale value of \$9.6M
 - 7 pot CVs (\$3.2M wholesale)
 - 3 H&L CPs (\$3.2M wholesale)
 - 4 jig vessels (\$36k wholesale)
 - 28 trawl CVs (\$3.0M wholesale)
 - 4 trawl CPs (\$85K wholesale)
 - 32 vessels $\leq$ 58'
- 5.6% of participating CVs' total annual revenue
- 1.9% of participating CPs' total annual revenue

AKFIN Dashboard Links: [Figures](#), [Reports](#)



WGOA Pacific
cod:

2024 summary
data (federal
fisheries)

- CV sector ownership:
 - Sand Point: 28%
 - Kodiak: 23%
 - Seattle: 15%
 - King Cove: 8%
 - Alaska residents: 77%
 - Washington residents: 18%
 - Other states: 5%
- Shoreside deliveries in Akutan, Dutch Harbor, False Pass, Sand Point
- CP sector ownership: 100% Washington, noting partial CDQ ownership

AKFIN Dashboard Links: [Figures](#), [Reports](#)



WGOA Pacific cod Reallocations

Reallocations of Pacific cod in the WGOA (mt), 2014-2024.

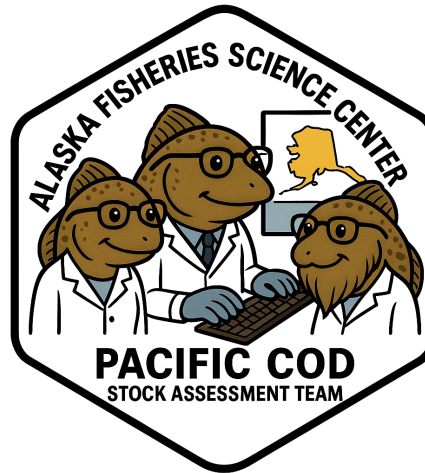
Sector	2014	2015-2017	2018	2019	2020-2021	2022	2023	2024	Total
Pot	550	0	678	215	0	-150	-452		841
Jig	300	0	40	50	0	0	2		392
Longline CV	50	0	7	35	0	150	445	200	887
Longline CP	0	0			0	400	430	240	1,070
Trawl CV	-900	0	-725	-330	0	-400	-425	-440	-3,220
Trawl CP	0	0		30	0	0	0		30



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- **Pacific cod movement research updates**





Pacific cod explorations

Steve Barbeaux, Pete Hulson,
Julie Nielsen and Ingrid Spies

Joint NPFMC Groundfish Plan Team
September 16, 2025



Pacific cod research update: Movement between areas, genetics, future assessment plans

[Presentation to the Groundfish Plan Teams \(link\)](#)

Next Steps

- **General research**

- Team
 - Attempt to obtain fishery composition and age data for the western Bering Sea
 - evaluate alternative assessment modeling platforms (RCEATTLE, SPoRC, RTMB)
 - Continue to evaluate utility of archived traditional tagging data for spatial modeling and movement
- Lorenzo Cianelli (OSU) – evaluation of fishery and survey data to ascertain appropriate stock splits for GOA Pacific cod
- Krista Oke (UAF) – develop a starvation index that will be tested as an environmental-link on time-varying natural mortality in the GOA Pacific cod stock assessment model

- **Tagging**

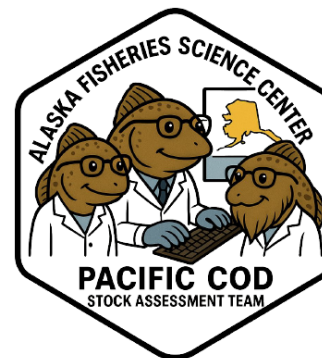
- Julie Nielsen et al. (Kingfisher Marine Research) – Unimak Pass Acoustic Array

- **Genetics**

- Jim Armstrong (FLC) – Linking spawning location of origin to fishery catch using a GT-seq panel

- **Spatial modelling**

- Stock Synthesis – Team
 - Continue development of alternative spatial models
 - Test sensitivity of two-area model to assumptions on WBS growth
 - Assess risks of not including WBS in our assessments
 - Expand to 3 area model separating wGOA into its own area
- SPoRC – Matt Cheng (UAF)
 - Stochastic Population model over Regional Components: a generalized, spatial, age/sex-structured stock-assessment framework implemented as an R/RTMB package
 - Create a spatial model for GOA/EBS Pacific cod to explore stock dynamics and environmental forcing of movement and mortality.



Pacific cod research update: Movement between areas, genetics, future assessment plans

[Presentation to the Groundfish Plan Teams \(link\)](#)

Thank You!



Contacts:

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scleaver@npfmc.org

