

C3 Gulf of Alaska Groundfish September 2023 Plan Team Report

Jim Ianelli (AFSC), Chris Lunsford (AFSC), Sara Cleaver (NPFMC)



October 2023
Presentation to the Council

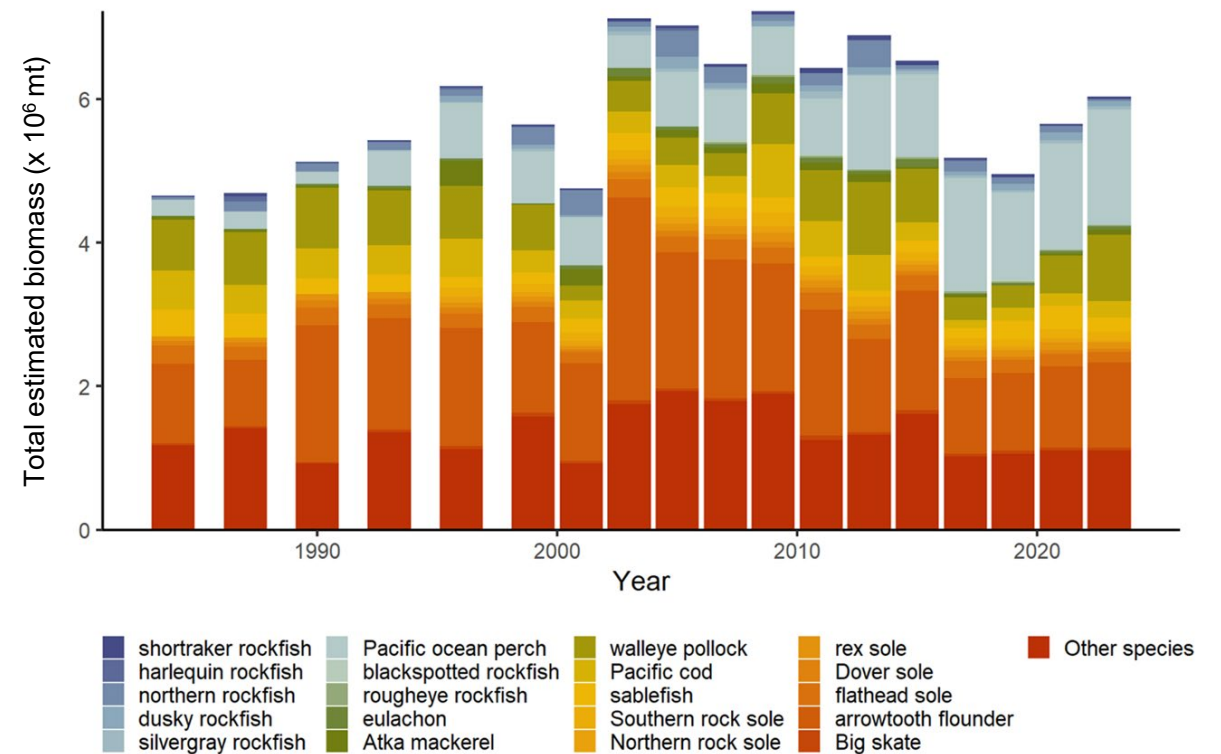


GOA Presentation Summary

Topic	Presenter	Type	Action
Survey slides	Laman, McKelvey, McGowan, DeRobertis	Info	No
<u>Shortraker survey weighting</u>	Kevin Siwicke	Model update	Yes
<u>Other rockfish</u>	Kristen Omori	Model update	Yes
<u>Rougheye/blackspotted rockfish</u>	Jane Sullivan	Model update	Yes
<u>Pollock</u>	Cole Monnahan, Grant Adams	Model update	Yes
<u>Pacific cod</u>	Pete Hulson	Model update	Yes
<u>Pacific ocean perch</u>	Maia Kapur	Model update	Yes
<u>Halibut DMRs</u> and <u>Proposed Specifications</u>	Michael Fey, Abby Jahn, Sara Cleaver		Yes

GOA Trawl Survey

- Highlights:
 - Survey methods update and standard data collections
 - Total biomass higher than 2021



GOA Trawl Survey

● Notable:

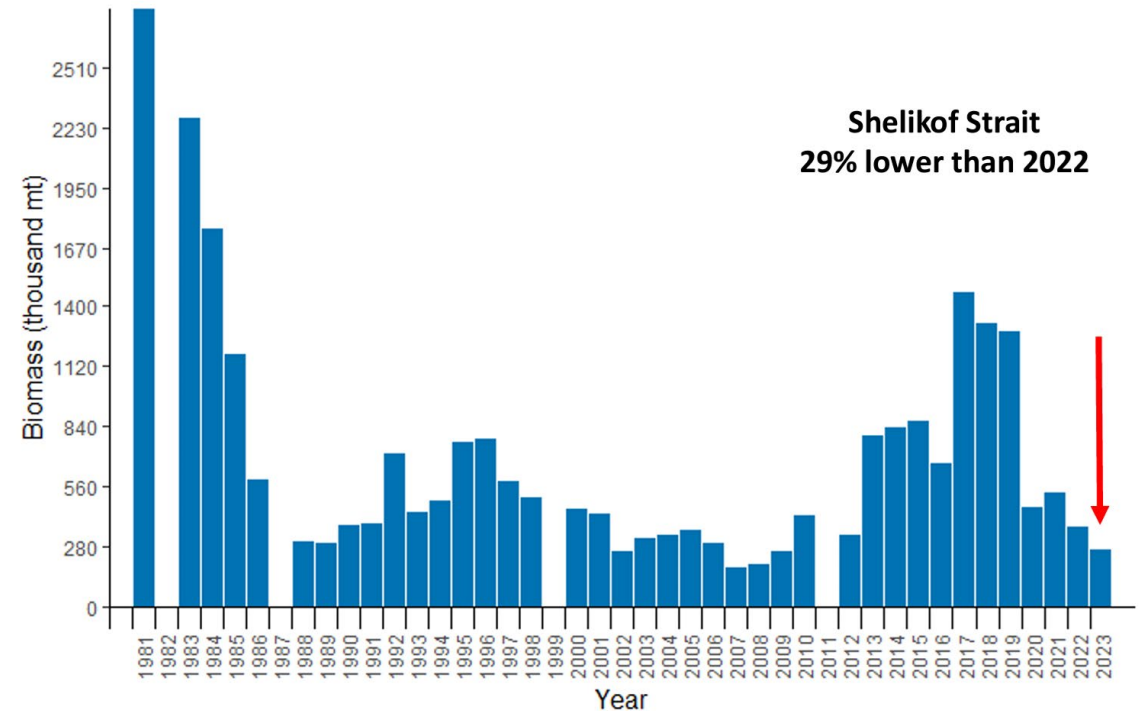
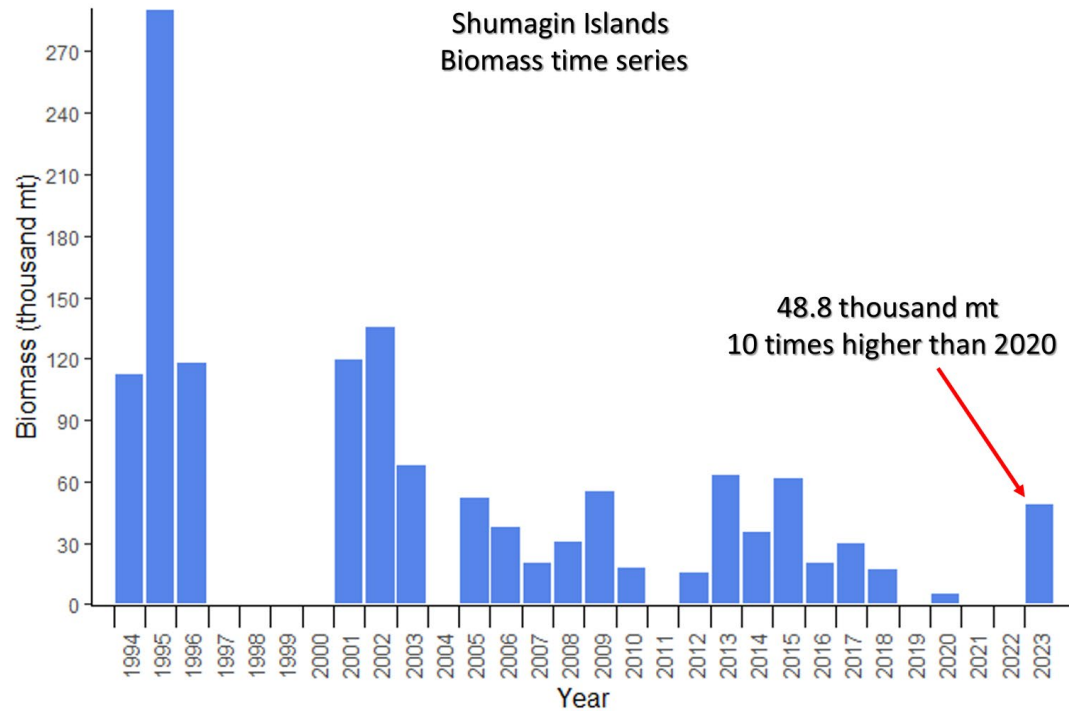
- Summary table useful for looking at all stocks together
- Showing % difference from previous survey
- Change relative to the long-term mean

Common name	% difference	Relative to longterm average
arrowtooth flounder	+5.3	Below
Atka mackerel	+219	Average
blackspotted RF	+0.6	Average
Dover sole	+6.2	Below
flathead sole	-21.7	Below
northern RF	-65	Below
Pacific cod	+32.5	Below
POP	+7.9	Above
rex sole	-17.6	Average
sablefish	-39.8	Below
shortraker RF	+14.4	Below
silvergray RF	-0.3	Above
southern rock sole	-10.4	Below
walleye pollock	+74.3	Above
eulachon	+14.1	Below
big skate	+14.9	Below

GOA Winter acoustic-trawl survey

● Highlights:

- Pollock trawls conducted in February in Shumagins and March in Shelikof Strait



GOA Summer acoustic trawl survey

● Highlights:

- Preliminary results of pollock, POP, and capelin biomass
- Overview of DriX Uncrewed Surface Vehicle (USV)



(Photo by Bryan Begun)

What we did

- Evaluated uncrewed surface vehicle as a 'force multiplier' for acoustic surveys
- Instrumented with 4-frequency EK80
- Developed shipboard procedures to safely deploy, recover, and refuel
- Controlled the USV over a satellite link
- Side-by-side testing to evaluate data and fish reactions to vessel

Future goals

- Reduce propeller cavitation to improve sonar performance. Currently produces good data to 150 m
- Increase weather window for launch/recovery

Contact: Alex.DeRobertis@noaa.gov

Thanks to Dave McGowan & Alex DeRobertis



Updates for November Assessments(provided at PT meeting)

	Assessment type	Updates	Presenter
Pollock	Full	<ul style="list-style-type: none"> • Exploration of fisheries selectivity 	Cole Monnahan and Grant Adams
Pacific cod	Full	<ul style="list-style-type: none"> • Exploring of environmental linkages 	Pete Hulson
Shortraker Rockfish	Update (or full)*	<ul style="list-style-type: none"> • Changes to survey weighting 	Kevin Siwicke
Rougheye/ Blackspotted Rockfish	Full	<ul style="list-style-type: none"> • Updates to data and apportionment using both surveys 	Jane Sullivan
Pacific ocean perch	Update	<ul style="list-style-type: none"> • Data updates, no modeling framework changes 	Maia Kapur
Other rockfish	Full	<ul style="list-style-type: none"> • Expanded time series • Some Tier 5 → Tier 6 • Move to most recent 3-year average survey biomass for natural mortality (M) 	Kristen Omori



Expected in December (Final Harvest Specifications)

Assessment Type	GOA Stocks for 2023	Description
Operational Full	Pollock Pacific cod Other rockfish Rougheye/Blackspotted rockfish	<ul style="list-style-type: none"> • Formerly known as “full” or “benchmark” • Considers all data, new model configurations, new modeling platform • Full in-depth review required
Operational Update	Deepwater flatfish Pacific ocean perch Shortraker rockfish Skates Sablefish	<ul style="list-style-type: none"> • Formerly also known as a “full” • Introduced to improve efficiency and reduce workload • Maintains model structure of previous full assessment, incorporates new data, minimal changes • Reduced review required
Harvest Projection	Arrowtooth flounder Dusky rockfish Flathead sole Northern/Southern rock sole Northern rockfish Rex sole	<ul style="list-style-type: none"> • Formerly known as “partial” • Executive summary • Runs projection model, reports new catches, catch/biomass or REMA model
Catch Report	Atka mackerel Demersal shelf rockfish Octopus Shallow water flatfish Thornyheads Sharks	<ul style="list-style-type: none"> • Formerly known as a “n/a” • Introduced to show off year assessments are still thought about and accounted for • Reports recent catch, ABC, OFL • Compiled by Council staff and included in SAFE report
Other	Sculpins (eco report)	

Demersal Shelf Rockfish/Other Rockfish Spatial Management

October 2022:

Council supports consideration of moving the seven DSR species which currently occur in the 'other rockfish' complex (i.e., those occurring to the west of EY/SEO) into the DSR assessment and expanding the DSR complex assessment to be GOA-wide during the 2023 Plan Team cycle



	Other Rockfish		Demersal Shelf Rockfish
WGOA & CGOA	EGOA:WY	EGOA:EY/SEO	EGOA:EY/SEO
Blackgill Rockfish	Blackgill Rockfish	Blackgill Rockfish	
Bocaccio	Bocaccio	Bocaccio	
Canary Rockfish	Canary Rockfish		Canary Rockfish
Chilipepper Rockfish	Chilipepper Rockfish	Chilipepper Rockfish	
China Rockfish	China Rockfish		China Rockfish
Copper Rockfish	Copper Rockfish		Copper Rockfish
Darkblotched Rockfish	Darkblotched Rockfish	Darkblotched Rockfish	
Greenstriped Rockfish	Greenstriped Rockfish	Greenstriped Rockfish	
Harlequin Rockfish	Harlequin Rockfish	Harlequin Rockfish	
	Northern Rockfish	Northern Rockfish	
Pygmy Rockfish	Pygmy Rockfish	Pygmy Rockfish	
Quillback Rockfish	Quillback Rockfish		Quillback Rockfish
Redbanded Rockfish	Redbanded Rockfish	Redbanded Rockfish	
Redstripe Rockfish	Redstripe Rockfish	Redstripe Rockfish	
Rosethorn Rockfish	Rosethorn Rockfish		Rosethorn Rockfish
Sharpchin Rockfish	Sharpchin Rockfish	Sharpchin Rockfish	
Silvergray Rockfish	Silvergray Rockfish	Silvergray Rockfish	
Splitnose Rockfish	Splitnose Rockfish	Splitnose Rockfish	
Stripetail Rockfish	Stripetail Rockfish	Stripetail Rockfish	
Tiger Rockfish	Tiger Rockfish		Tiger Rockfish
Vermilion Rockfish	Vermilion Rockfish	Vermilion Rockfish	
Widow Rockfish	Widow Rockfish	Widow Rockfish	
Yelloweye Rockfish	Yelloweye Rockfish		Yelloweye Rockfish
Yellowmouth Rockfish	Yellowmouth Rockfish	Yellowmouth Rockfish	
Yellowtail Rockfish	Yellowtail Rockfish	Yellowtail Rockfish	

DSR/OR Spatial Management: ABCs and OFLs

The proposed change would result in ABCs and OFLs being spatially apportioned in the following ways:

OR: One Gulf-wide OFL with three separate ABCs for WG/CG, WY ABC, EY/SEO (Table 3). These are the same as the current status quo, but would no longer include species in the DSR-subgroup.

DSR: Two stock complexes with separate OFLs and ABCs for WG/CG/WY and EY/SEO (Table 4). Until more is known about the DSR stock structure in the Gulf, the EY/SEO DSR stock complex would be managed separately from the WG/CG/WY stock complex, with different OFLs and ABCs. This will enable monitoring of catch of each complex to ensure that underharvested catch for one complex is not utilized in another area, which is a particular concern for DSR in EY/SEO.



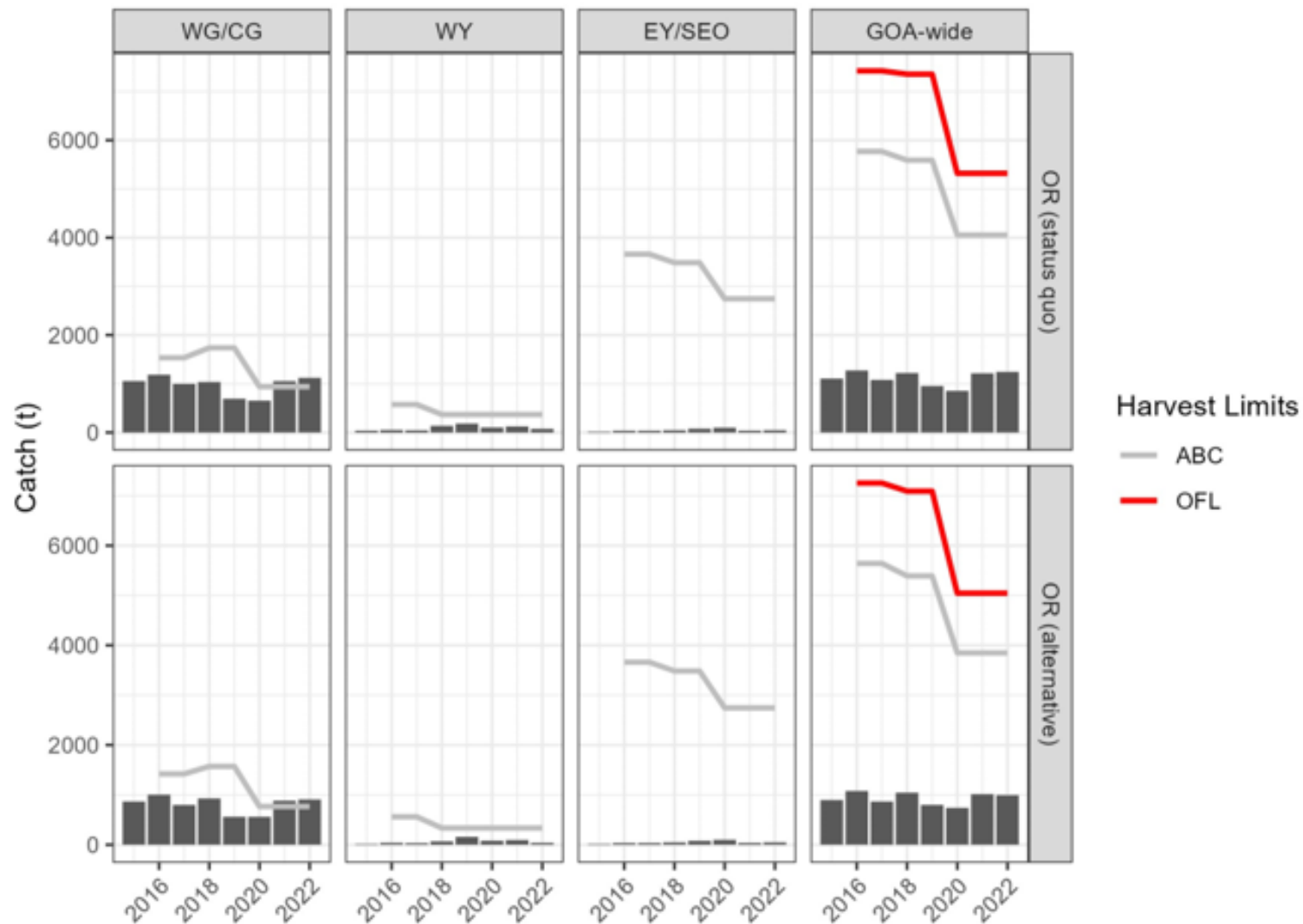


Figure 1. Historical catch from 2015 – 2022 for status quo Other Rockfish complex (OR (status quo, top)) and proposed alternative complex (OR (alternative), bottom) in each management area (Western and Central Gulf (WG/CG), West Yakutat (WY), and EY/SEO- East Yakutat/ Southeast Outside) and Gulf of Alaska- wide (GOA-wide) with harvest limits. Solid gray line indicates the ABC, solid red line designates the OFL. Catch in the OR (alternative) row represents catch of OR without DSR subgroup species.

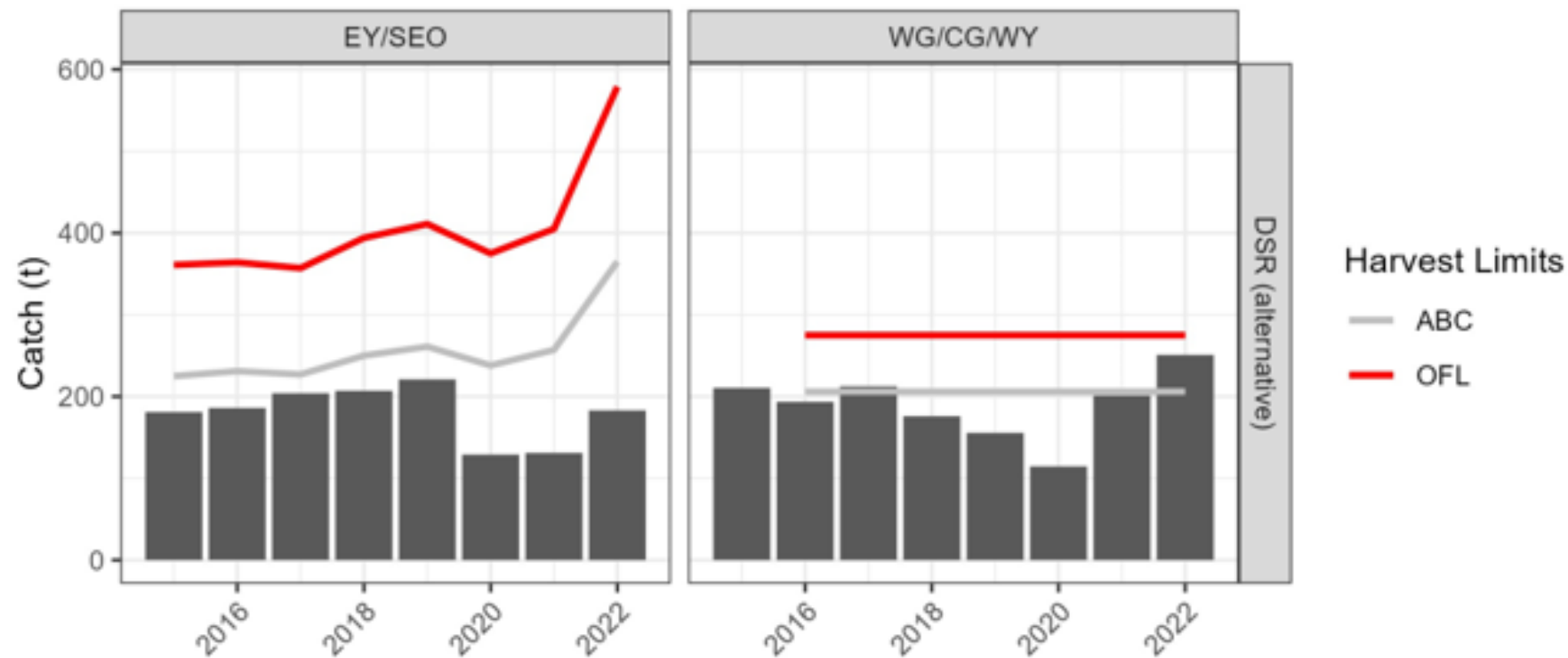


Figure 2. Historical catch from 2015 – 2022 for the proposed alternative Demersal Shelf Rockfish complex (DSR (alternative)) in the two management area groupings (Western Gulf, Central Gulf, and West Yakutat (WG/CG/WY), and EY/SEO- East Yakutat/ Southeast Outside) with harvest limits. Status quo for DSR would be the same as EY/SEO figure, with no figure for WG/CG/WY because DSR subgroup is included in OR in WG/CG and WY areas in status quo (Figure 1 top row). Solid gray line indicates the ABC, solid red line designates the OFL. Note, the historical catch for DSR (alternative) are from Catch Accounting System (CAS) for WG/CG/WY and the 2022 DSR stock complex assessment for EY/SEO.

Other Rockfish: Spatial management ORO X/DSR

If the Council does not identify any concerns, this change to DSR and OR would move forward during the 2024 Plan Team cycle for implementation in the 2025 -2026 harvest specifications for 2025 fisheries, as recommended by the assessment authors and Plan Team.



GOA Halibut discard mortality rates (DMRs)

Thanks to Michael Fey (AKFIN) and other Halibut DMR Working Group members: Jen Cahalan (PSMFC), Jennifer Ferdinand (NMFS AFSC), Mary Furuness (NMFS AKRO), Jason Gasper (NMFS AKRO), Ian Stewart (IPHC)

Area	Gear	Operation	2023 DMRs (specified)	2024/25 DMRs (recommended)
BSAI	Pot	All	26%	26% ^b
	Hook-and-line	CP	9%	7%
	Hook-and-line	CV	9% ^a	7% ^a
	Non-pelagic trawl	Mothership / CP	85%	85%
	Non-pelagic trawl	CV	62%	63%
GOA	Pot	All	27%	26% ^b
	Hook-and-line	CP	13%	11%
	Hook-and-line	CV	9%	10% ^b
	Non-pelagic trawl	Mothership / CP	83%	83%
	Non-pelagic trawl	CV	74%	69%
	Non-pelagic trawl	CV-Rockfish Prog	55%	56% ^b
All	Pelagic trawl	All	100%*	100%*

^a Based on BSAI HAL CP

^b 4-year average

*Fixed, not estimated

Table 1. Plan Team proposed OFL and ABC for Groundfish in the Gulf of Alaska (metric tons) for 2024 and 2025

Species	Area	2022			Catch 12/31/2022	2023			Catch 9/14/2023	Plan Team Proposed 2024/25		
		OFL	ABC	TAC		OFL	ABC	TAC		OFL	ABC	TAC
Pollock	State GHL	n/a	3,327	n/a		n/a	3,723	n/a	3,261	n/a	4,027	n/a
	W (810)	n/a	23,714	23,714	23,815	n/a	26,958	26,958	6,033	n/a	29,156	
	C (620)	n/a	69,250	69,250	69,341	n/a	77,005	77,005	58,327	n/a	83,283	
	C (630)	n/a	30,068	30,068	30,505	n/a	33,729	33,729	13,052	n/a	36,478	
	WYAK	n/a	6,722	6,722	6,441	n/a	7,523	7,523	6,888	n/a	8,136	
	Subtotal	154,983	133,081	129,754	129,902	173,470	148,938	145,215	84,300	186,101	161,080	-
	EYAK/SEO	15,150	11,363	11,363	-	15,150	11,363	11,363	1	15,150	11,363	
Total	170,133	144,444	141,117	129,902	188,620	160,301	156,578	84,300	201,251	172,443	-	
Pacific Cod	W	n/a	9,942	6,959	5,320	n/a	7,484	5,225	3,233	n/a	6,873	
	C	n/a	19,752	14,814	13,195	n/a	14,830	11,123	8,501	n/a	13,655	
	E	n/a	3,117	2,338	298	n/a	2,340	1,755	510	n/a	2,155	
	Total	39,555	32,811	24,111	18,813	29,737	24,634	18,103	12,245	27,507	22,683	-
Sablefish	W	n/a	3,727	3,727	3,035	n/a	4,473	4,473	2,313	n/a	4,626	
	C	n/a	9,965	9,965	8,189	n/a	9,921	9,921	5,456	n/a	8,819	
	WYAK	n/a	3,437	3,437	2,746	n/a	3,205	3,205	2,043	n/a	2,669	
	SEO	n/a	5,665	5,665	5,237	n/a	5,602	5,602	3,596	n/a	4,981	
	GOA Total	n/a	22,794	22,794	19,207	n/a		23,201	13,409	n/a	n/a	-
	AK Total	40,432	34,521	n/a		47,390	40,502	n/a		48,561	41,539	n/a
Shallow-Water Flatfish	W	n/a	21,256	13,250	33	n/a	22,485	13,250	33	n/a	23,299	
	C	n/a	25,305	25,305	1,264	n/a	26,769	26,769	589	n/a	27,737	
	WYAK	n/a	2,531	2,531	8	n/a	2,677	2,677	6	n/a	2,774	
	EYAK/SEO	n/a	1,518	1,518	2	n/a	1,606	1,606	1	n/a	1,664	
	Total	62,273	50,610	42,604	1,307	65,736	53,537	44,302	630	68,015	55,474	-
Deep-Water Flatfish	W	n/a	256	256	3	n/a	256	256	11	n/a	255	
	C	n/a	2,139	2,139	117	n/a	2,105	2,105	68	n/a	2,068	
	WYAK	n/a	1,431	1,431	3	n/a	1,407	1,407	3	n/a	1,383	
	EYAK/SEO	n/a	2,082	2,082	8	n/a	2,048	2,048	2	n/a	2,013	
	Total	7,026	5,908	5,908	131	6,918	5,816	5,816	84	6,802	5,719	-
Rex Sole	W	n/a	2,981	2,981	40	n/a	3,236	3,236	21	n/a	3,314	
	C	n/a	12,076	12,076	655	n/a	13,110	13,110	355	n/a	13,425	
	WYAK	n/a	1,361	1,361	-	n/a	1,439	1,439	-	n/a	1,453	
	EYAK/SEO	n/a	2,723	2,723	-	n/a	2,879	2,879	-	n/a	2,905	
	Total	23,302	19,141	19,141	695	25,135	20,664	20,664	376	25,652	21,097	-
Arrowtooth Flounder	W	n/a	33,658	14,500	446	n/a	30,469	14,500	133	n/a	30,093	
	C	n/a	68,394	68,394	11,092	n/a	65,000	65,000	8,102	n/a	64,200	
	WYAK	n/a	6,707	6,707	38	n/a	7,886	7,886	28	n/a	7,789	
	EYAK/SEO	n/a	11,020	6,900	67	n/a	16,130	6,900	25	n/a	15,932	
	Total	143,100	119,779	96,501	11,643	142,749	119,485	94,286	8,287	141,008	118,014	-
Flathead Sole	W	n/a	14,755	8,650	43	n/a	12,793	8,650	12	n/a	13,033	
	C	n/a	22,033	15,400	521	n/a	21,487	21,487	364	n/a	21,892	
	WYAK	n/a	1,511	1,511	-	n/a	2,320	2,320	-	n/a	2,363	
	EYAK/SEO	n/a	1,876	1,876	-	n/a	2,880	2,880	-	n/a	2,934	
	Total	48,928	40,175	27,437	564	48,161	39,480	35,337	376	49,073	40,222	-
Pacific ocean perch	W	n/a	2,602	2,602	2,506	n/a	2,529	2,529	2,312	n/a	2,461	
	C	n/a	30,806	30,806	25,548	n/a	29,940	29,940	23,288	n/a	29,138	
	WYAK	n/a	1,409	1,409	1,398	n/a	1,370	1,370	1,366	n/a	1,333	
	W/C/WYAK	41,470	34,817	34,817	29,452	40,308	33,839	33,839	26,967	39,229	32,932	-
	SEO	4,110	3,451	3,451	-	3,994	3,354	3,354	-	3,888	3,264	
	Total	45,580	38,268	38,268	29,452	44,302	37,193	37,193	26,967	43,117	69,128	-

GOA Groundfish
Proposed
Harvest Specifications
(Plan Team
recommended ABCs,
OFLs)

Table 1.
(1 of 2)
([link](#))

Thanks to Abby Jahn,
NMFS Inseason
Management

GOA Groundfish
Proposed
Harvest Specifications
(Plan Team proposed
ABCs, OFLs)

Table 1.
(2 of 2)
([link](#))

Northern Rockfish	W	n/a	1,944	1,944	474	n/a	2,614	2,614	360	n/a	2,497	
	C	n/a	3,202	3,202	1,424	n/a	2,350	2,350	934	n/a	2,244	
	E	n/a	-	-	-	n/a	-	-	-	n/a	-	-
	Total	6,143	5,146	5,146	1,898	5,927	4,964	4,964	1,295	5,661	4,741	-
Shorthead Rockfish	W	n/a	51	51	7	n/a	51	51	6	n/a	51	
	C	n/a	280	280	294	n/a	280	280	133	n/a	280	
	E	n/a	374	374	171	n/a	374	374	186	n/a	374	
	Total	940	705	705	472	940	705	705	325	940	705	-
Dusky Rockfish	W	n/a	269	269	106	n/a	149	149	56	n/a	141	
	C	n/a	4,534	4,534	2,472	n/a	7,647	7,647	3,376	n/a	7,264	
	WYAK	n/a	427	427	6	n/a	90	90	1	n/a	85	
	EYAK/SEO	n/a	142	142	-	n/a	31	31	-	n/a	30	
	Total	8,614	5,372	5,372	2,584	9,638	7,917	7,917	3,433	9,154	7,520	-
Rougheye and Blackspotted Rockfish	W	n/a	184	184	95	n/a	180	180	101	n/a	180	
	C	n/a	235	235	185	n/a	232	232	133	n/a	231	
	E	n/a	369	369	190	n/a	363	363	148	n/a	361	
	Total	947	788	788	470	930	775	775	381	927	772	-
Demersal shelf rockfish	Total	579	365	365	166	376	283	283	197	376	283	
Thornyhead Rockfish	W	n/a	352	352	110	n/a	314	314	49	n/a	314	
	C	n/a	910	910	173	n/a	693	693	87	n/a	693	
	E	n/a	691	691	76	n/a	621	621	44	n/a	621	
	Total	2,604	1,953	1,953	359	2,170	1,628	1,628	179	2,170	1,628	-
Other Rockfish	W/C	n/a	940	940	1,122	n/a	940	940	868	n/a	940	
	WYAK	n/a	370	370	78	n/a	370	370	46	n/a	370	
	EYAK/SEO	n/a	2,744	300	50	n/a	2,744	300	24	n/a	2,744	
	Total	5,320	4,054	1,610	1,250	5,320	4,054	1,610	938	5,320	4,054	-
Atka mackerel	Total	6,200	4,700	3,000	880	6,200	4,700	3,000	435	6,200	4,700	
Big Skate	W	n/a	591	591	174	n/a	591	591	47	n/a	591	
	C	n/a	1,482	1,482	735	n/a	1,482	1,482	619	n/a	1,482	
	E	n/a	794	794	116	n/a	794	794	117	n/a	794	
	Total	3,822	2,867	2,867	1,025	3,822	2,867	2,867	783	3,822	2,867	-
Longnose Skate	W	n/a	151	151	77	n/a	151	151	58	n/a	151	
	C	n/a	2,044	2,044	505	n/a	2,044	2,044	405	n/a	2,044	
	E	n/a	517	517	409	n/a	517	517	605	n/a	517	
	Total	3,616	2,712	2,712	991	3,616	2,712	2,712	1,068	3,616	2,712	-
Other Skates	GOA-wide	1,311	984	984	1,041	1,311	984	984	318	1,311	984	
Sharks	GOA-wide	5,006	3,755	3,755	2,160	6,521	4,891	4,891	1,344	6,521	4,891	
Octopuses	GOA-wide	1,307	980	980	155	1,307	980	980	139	1,307	980	
TOTAL		626,738	520,038	448,118	225,165	646,826	539,072	468,796	157,510	658,311	583,156	-

Sources: 2022 OFLs, ABCs, and TACs are from harvest specifications adopted by the Council in December 2021. 2022 catches through December 31, 2022, and 2023 catches through September 14, 2023 from AKR Catch Accounting.

Thanks to Abby Jahn,
NMFS Inseason
Management



Table 2. Proposed 2024 and 2025 Gulf of Alaska Pacific cod ABCs, TACs, and State Guideline Harvest Levels (GHLs)

[Values are rounded to the nearest metric ton]

Specifications	Western	Central	Eastern	Total
ABC	6,873	13,655	2,155	22,683
State GHL	2,062	3,414	539	6,014
(%)	30%	25%	25%	
Federal TAC	4,811	10,241	1,616	16,668



Table 9. Proposed 2024 and 2025 Pacific Halibut PSC Limits, Allowances, and Apportionments

[Values are in metric tons]

Trawl gear			Hook-and-line gear ¹				
			Other than DSR			DSR	
Season	Percent	Amount ²	Season	Percent	Amount	Season	Amount
January 20 - April 1	30.5%	520	January 1 - June 10	86%	220	January 1 - December 31	9
April 1 - July 1	20%	341	June 10 - September 1	2%	5		
July 1 - August 1	27%	460	September 1 - December 31	12%	31		
August 1 - October 1	7.5%	128					
October 1 - December 31	15%	256					
Total		1,705			256		9

¹ The Pacific halibut PSC limit for hook-and-line gear is allocated to the demersal shelf rockfish (DSR) fishery and fisheries other than DSR. The hook-and-line IFQ sablefish fishery is exempt from halibut PSC limits, as are pot and jig gear for all groundfish fisheries.

² PSC limits published in the Final Harvest Specifications (88 FR 13238, March 2, 2023) had rounding errors. The values presented in this table correct these rounding errors and will be published accordingly in the Proposed and Final 2024 and 2025 Harvest Specifications.

Table 10. Proposed 2024 and 2025 Apportionment of the Pacific Halibut PSC Limits Between the Trawl Gear Shallow-Water and Deep-Water Species Fishery Categories

[Values are in metric tons]

Season	<u>Shallow-water</u>	Deep-water ¹	Total ³
January 20 - April 1	384	135	520
April 1 - July 1	85	256	341
July 1 - August 1	121	341	460
August 1 - October 1	53	75	128
Subtotal January 20 - October 1	643	807	1,449
October 1 - December 31 ²	n/a	n/a	256
Total	n/a	n/a	1,705

¹ The third season deep-water apportionment of 341 mt is reduced by 191.4 mt for the Rockfish Program Halibut PSC allocation.

² There is no apportionment between trawl shallow-water and deep-water species fisheries during the fifth season (October 1 through December 31).

³ PSC limits published in the Final Harvest Specifications (88 FR 13238, March 2, 2023) had rounding errors. The values presented in this table correct these rounding errors and will be published accordingly in the Proposed and Final 2024 and 2025 Harvest Specifications.

Table 11. Proposed 2024 and 2025 Apportionments of the “Other Hook and Line Fisheries” Halibut PSC Allowance Between the Hook-and-Line Gear Catcher Vessel and Catcher/Processor Sectors

[Values are in metric tons]

Hook-and-Line gear (Other than DSR) Annual PSC Amount	Hook-and-line Sector	Annual Amount	Season	Seasonal Percentage	Seasonal Amount
256	CV	149	A	86%	128
			B	2%	3
			C	12%	18
	CP	107	A	86%	92
			B	2%	2
			C	12%	13

Table 12. Proposed 2024 and 2025 Discard Mortality Rates for Vessels Fishing in the Gulf of Alaska

[Values are percent of halibut assumed to be dead]

Gear	Sector	Groundfish fishery	Halibut discard mortality rate (percent)
Pelagic trawl	Catcher vessel	All	100
	Catcher/processor	All	100
Non-pelagic trawl	Catcher vessel	Rockfish Program	56
	Catcher vessel	All others	69
	Mothership and catcher/processor	All	83
Hook-and-line	Catcher/processor	All	11
	Catcher vessel	All	10
Pot	Catcher vessel and catcher/processor	All	26



Questions?

GOA
Groundfish Plan
Team Contacts:

Sara.Cleaver@noaa.gov

Jim.Ianelli@noaa.gov

Chris.Lunsford@noaa.gov