HARVEST SPECIFICATIONS IMPACT ANALYSIS FOR 2027-28 BIENNIUM

Table of Contents

1. Introduction

This document describes the 2027-28 harvest specifications for all managed groundfish stocks and stock complexes managed by the Pacific Fishery Management Council (Council). The harvest specifications reported in this document for the 2027-28 biennium include the overfishing limit (OFL), acceptable biological catch (ABC), and annual catch limit (ACL) for all stocks and stock complexes actively managed under the Pacific Coast Groundfish Fishery Management Plan (FMP). These metrics are described in detail in the Status of the Pacific Coast Groundfish Fishery: Stock Assessment and Fishery Evaluation (SAFE) document, which is incorporated by reference.

At the national level, National Standard 1 Guidelines at 50 CFR §600.310 define harvest specifications and what must be considered when specifying them. The FMP, at Chapter 4, describes the framework for biennial specifications, as well as Chapter 3 of the SAFE document. The OFL, ABC, and the ACL for each stock is based on the best scientific information available including endorsed stock assessments, changes in Scientific and Statistical Committee (SSC)-endorsed stock categories, or changes in SSC-endorsed sigma values (i.e., variances used to estimate the uncertainty in estimating OFLs). Any revised or new HCRs adopted by the Council and used to determine specifications for the subject biennial period become the new default for future biennial management cycles.

The OFL is the maximum sustainable yield (MSY) estimated for the stock and the legal harvest limit beyond which constitutes overfishing. The OFL is determined either by applying the harvest rate estimated to result in a biomass capable of sustaining MSY (i.e., FMSY) recommended by the Council's SSC to an estimate of exploitable biomass in the case of assessed stocks or through an approved data-limited method (e.g., DCAC or DB-SRA) in the case of unassessed stocks. OFLs are adopted for every actively managed stock or stock complex. A further reduction from the OFL can be specified to account for management uncertainty, socioeconomic considerations, ecological considerations, conservation objectives, and/or other considerations the Council and National Marine Fisheries Service (NMFS) wish to address.

In brief, the ABC is a harvest specification set below the OFL and is a threshold that incorporates a scientific uncertainty buffer against overfishing (i.e., exceeding the OFL). The ABC is based on a percentage reduction of the OFL. Scientific uncertainty associated with estimating an OFL is defined as sigma (σ). The magnitude of σ estimated within an assessment is closely linked to the amount of data and/or the modeling assumptions used in the stock assessment, hence, the SSC has specified default σ values that serve as lower limits that should be incorporated into data-rich, data-moderate, and data-limited assessments of West Coast groundfish species. The percentage reduction of an OFL to an ABC is determined by translating the estimated σ to a range of probability of overfishing (P*) values. The P* is based on the probability that the ABC exceeds the true (but unknown) OFL and represents the Council's degree of risk tolerance that the ABC for a stock is being set higher than what the OFL should have been, or that catching the ABC would result in biological overfishing of the stock. At present, the FMP specifies that the maximum P* value is 0.45 and represents a 45 percent chance of exceeding the OFL in terms of the risk. A P* = 0.5 is equivalent to fishing at FMSY, with no precautionary reduction to account for scientific uncertainty. In this process, MSA vests the authority of setting the ABC solely with the SSC. The Council can recommend P* values. For a complete history of the P* and sigma framework, see Agenda Item E.7, Supplemental Attachment 1, June 2025.

These two factors result in a prescribed reduction or buffer that the ABC can, but is not required to, be reduced to an ACL in order to account for concerns regarding conservation objectives, management uncertainty, etc. The ACL is a harvest specification set equal to or below the ABC in consideration of conservation objectives, socioeconomic concerns, management uncertainty, ecological concerns, and other factors. The ACL is a harvest limit that includes all sources of fishing-related mortality including landings, discard mortality, research catches, and catches in exempted fishing permit activities. Sector-specific ACLs can be specified, especially in cases where a sector has a formal, long-term allocation of the harvestable surplus of a stock or stock complex. The ACL serves as the basis for invoking accountability measures.

The harvest specifications, as detailed in this document, are posted to the Pacific Fisheries Information Network (PacFIN) under the APEX reporting system. In particular, APEX report GMT008 is available to view default harvest control rules and any Alternative harvest specifications analyzed by the Council (e.g. filter by year and by stock set). APEX report formatting may differ.

2. Alternatives

This chapter describes the alternatives that could be implemented to manage groundfish fisheries for the 2027-2028 biennial period. In the harvest specifications and management measures process, No Action is largely not a tenable option as it does not reflect the best scientific information available (BSIA) per Amendment 24. As such, No Action is not reported herein other than as a comparative tool for reference to changes between it and Alternative 1.

Per the November 2025 Council meeting, Alternative 1 reflects the default harvest control rules (HCR) as applied to the best scientific information available (BSIA), Alternative 2 reflects the alternative HCRs for the identified stocks (yellowtail north of 40°10′ N. lat., chilipepper, rougheye/blackspotted, yelloweye, and canary rockfishes, shortspine thornyhead, and petrale sole). The species with Alternatives proposed which consider changes to their default harvest control rules (HCR) are shown in Table 1.

The Alternatives are summarized in Table 3 and detailed below in Section 2.3.

2.1 No Action (2025 harvest specifications)

The No Action scenario describes the 2025 harvest specifications. No Action is not an alternative under consideration for implementation, as the 2025 harvest specifications do not represent the best scientific information available. In brief, the No Action Alternative is an untenable option and is presented only as an informal comparison for the Council and stakeholders to understand the changes in directionality of 2025 biennial specifications compared to the proposed 2027-28 biennial specifications and management measures. The detailed analyses of 2025 harvest specifications and their impacts are found on the Council's web page at www.pcouncil.org/documents/2024/07/2025-26-preferred-groundfish-harvest-specifications-and-management-measures-council-analytical-document.pdf/ .

Table 1: No Action, 2025 overfishing limits (OFL), acceptable biological catches (ABC), and annual catch limits (ACL) in metric tons (mt) for stocks and stock complexes and their fishery management units (FMU) managed by the Council. All values are rounded to nearest mt.

Year	Stock	FMU	OFL (mt)	ABC (mt)	ACL (mt)
2025	QUILLBACK	CA	2	1	1
2025	YELLOWEYE ROCKFISH	CW	106	87	56
2025	Arrowtooth Flounder	CW	16,460	11,193	11,193
2025	Big Skate	CW	1,456	1,224	1,224
2025	Black Rockfish	CA	250	234	224
2025	Black Rockfish	WA	262	245	245
2025	Bocaccio	S of 40° 10'	1,849	1,681	1,681
2025	Cabezon	CA	176	162	162
2025	Cabezon/Kelp Greenling	OR	196	177	177
2025	Cabezon/Kelp Greenling	WA	19	15	15
2025	California Scorpionfish	CW	273	244	244
2025	Canary Rockfish	CW	647	605	571
2025	Chilipepper	S of 40° 10'	3,128	2,815	2,815
2025	Cowcod	S of 40° 10'	111	77	77
2025	Darkblotched Rockfish	CW	830	754	754
2025	Dover Sole	CW	51,214	47,424	47,424
2025	English Sole	CW	11,175	8,884	8,884
2025	Lingcod	N of 40° 10'	4,237	3,631	3,631
2025	Lingcod	S of 40° 10'	897	768	748
2025	Longnose Skate	CW	1,922	1,616	1,616
2025	Longspine Thornyhead	CW	4,284	2,698	
2025	Longspine Thornyhead	N of 34° 27'			2,050
2025	Longspine Thornyhead	S of 34° 27'			648
2025	Pacific Cod	CW	3,200	1,926	1,600
2025	Pacific Ocean Perch	N of 40° 10'	4,029	3,328	3,328
2025	Pacific Spiny Dogfish	CW	1,857	1,361	1,361
2025	Pacific Whiting[a]	CW			295,520
2025	Petrale Sole	CW	2,518	2,354	2,354
2025	Sablefish	CW	39,085	36,545	
2025	Sablefish	N of 36			28,688
2025	Sablefish	S of 36			7,857
2025	Shortspine Thornyhead	CW	940	821	815
2025	Splitnose	S of 40° 10'	1,724	1,508	1,508
2025	Starry Flounder	CW	652	392	392
2025	Widow Rockfish	CW	12,254	11,237	11,237
2025	Yellowtail Rockfish	N of 40° 10'	6,866	6,241	6,241
2025	Blue/Deacon/Black Rockfish	OR	464	423	423
2025	Nearshore Rockfish North	N of 40° 10'	106	88	88
2025	Nearshore Rockfish South	S of 40° 10'	1,137	934	932

2025	Other Fish	CW	286	223	223
2025	Other Flatfish	CW	10,894	7,974	7,974
2025	Shelf Rockfish North	N of 40° 10'	1,669	1,330	1,330
2025	Shelf Rockfish South	S of 40° 10'	1,828	1,458	1,457
2025	Slope Rockfish North	N of 40° 10'	1,779	1,488	1,488
2025	Slope Rockfish South	S of 40° 10'	866	693	693

[a]Pacific whiting ACLs are set through an annual US/Canada treaty process external to the Council

2.2 Default Harvest Specifications (Alternative 1)

Default harvest specifications would be implemented under Alternative 1. As discussed above, default harvest specifications are computed by applying the best scientific information available, such as new endorsed stock assessments, to current, default HCRs for all groundfish stocks.

Chapter 4 of the Groundfish FMP specifies the framework for the default harvest specifications as follows, "… the harvest controls from the previous biennium (referred to as default harvest control rules) are applied to the best available scientific information to determine the numerical values of the harvest specifications for the next biennial period. The default HCR would establish the harvest specifications based on the FMSY (or proxy value) used in the previous biennium applied to the best current estimate of stock biomass to determine the OFL. The ABC is determined by applying the uncertainty buffer used in the previous biennium except that if the P* approach was used, the same P* value used in the previous biennium is applied. The ACL is determined using the appropriate method for current stock status, if known. If a stock has recovered such that stock size is now above the MSY biomass target, the default harvest control sets the ACL equal to the ABC using the same P* value used in the previous biennium, if applicable. If the status has not changed or is unknown, the same method used in the previous cycle is used to compute the default HCR. This includes cases where a constant catch HCR was used in the previous cycle to set the ACL below the ABC, in which case the same constant catch numerical value is used as the default ACL for the next biennial cycle. In the case of a stock managed under a rebuilding plan, the default HCR is the one described in the current rebuilding plan."

Table 2 provides 2027-28 OFLs based on the best current estimate of stock biomass, ABCs based on the Scientific and Statistical Committee's (SSC's) default or recommended sigma values (σ - scientific uncertainty) for each stock category and overfishing probabilities (P*s - probability of overfishing) selected by the Pacific Fishery Management Council from the 2025-26 management cycle, or recommended as default by the SSC for this biennium (see below), and ACLs that comport with the default HCRs. A detailed table showing details of stock sub-area assessment specifications and stock complex component stock specifications is found in {Section 5}

Table 2: Alternative 1, Draft 2027-28 overfishing limits (OFL), acceptable biological catches (ABC), and annual catch limits (ACL) under default harvest control rules in metric tons (mt) for each stock and stock complex fishery management unit (FMU). See Appendix 1 for additional detail. Values are rounded to nearest mt.

YEAR	Stock	FMU	OFL (mt)	ABC (mt)	ACL (mt)
2027	Quillback	CA	13	12	12
2028	Quillback	CA	13	12	12
2027	Yelloweye Rockfish	CW	129	113	113
2028	Yelloweye Rockfish	CW	131	113	113

2027	Arrowtooth Flounder	CW	12,152	7,947	7,947
2028	Arrowtooth Flounder	CW	11,107	7,131	7,131
2027	Big Skate	CW	1,398	1,155	1,155
2028	Big Skate	CW	1,372	1,122	1,122
2027	Black Rockfish	CA	281	260	249
2028	Black Rockfish	CA	293	270	261
2027	Black Rockfish	WA	260	240	240
2028	Black Rockfish	WA	261	241	241
2027	Bocaccio	S of 40° 10’	2,542	2,288	2,288
2028	Bocaccio	S of 40° 10’	2,438	2,185	2,185
2027	Cabezon	CA	165	150	150
2028	Cabezon	CA	161	146	146
2027	California Scorpionfish	CW	263	233	233
2028	California Scorpionfish	CW	261	229	229
2027	Canary Rockfish	CW	694	643	606
2028	Canary Rockfish	CW	721	665	623
2027	Chilipepper	S of 40° 10’	3,194	2,986	2,986
2028	Chilipepper	S of 40° 10’	3,086	2,870	2,870
2027	Cowcod	S of 40° 10’	111	74	74
2028	Cowcod	S of 40° 10’	111	73	73
2027	Darkblotched Rockfish	CW	859	773	773
2028	Darkblotched Rockfish	CW	842	754	754
2027	Dover Sole	CW	42,064	38,573	38,573
2028	Dover Sole	CW	39,010	35,616	35,616
2027	English Sole	CW	4,072	3,168	3,168
2028	English Sole	CW	4,072	3,168	3,168
2027	Lingcod	N of 40° 10’	4,140	3,482	3,482
2028	Lingcod	N of 40° 10’	4,128	3,439	3,439
2027	Lingcod	S of 40° 10’	966	812	789
2028	Lingcod	S of 40° 10’	984	820	796
2027	Longnose Skate	CW	1,872	1,546	1,546
2028	Longnose Skate	CW	1,852	1,515	1,515
2027	Longspine Thornyhead	CW	4,076	2,471	
2028	Longspine Thornyhead	CW	4,008	2,413	
2027	Longspine Thornyhead	N of 34° 27’			1,878
2028	Longspine Thornyhead	N of 34° 27’			1,834
2028	Longspine Thornyhead	S of 34° 27’			579
2027	Longspine Thornyhead	S of 34° 27’			593
2027	Pacific Cod	CW	3,200	1,926	1,600
2028	Pacific Cod	CW	3,200	1,926	1,600
2027	Pacific Ocean Perch	N of 40° 10’	3,856	3,123	3,123
2028	Pacific Ocean Perch	N of 40° 10’	3,781	3,036	3,036
2027	Pacific Spiny Dogfish	CW	1,810	1,278	1,278

Year	Species	Area			
2028	Pacific Spiny Dogfish	CW	1,790	1,240	1,240
2027	Pacific Whiting[a]	CW			
2028	Pacific Whiting[a]	CW			
2027	Petrale Sole	CW	2,645	2,449	2,449
2028	Petrale Sole	CW	2,628	2,423	2,423
2027	Sablefish	CW	14,935	13,964	
2028	Sablefish	CW	16,240	15,103	
2027	Sablefish	N of 36			10,962
2028	Sablefish	N of 36			11,856
2028	Sablefish	S of 36			3,247
2027	Sablefish	S of 36			3,002
2027	Shortspine Thornyhead	CW	994	852	847
2028	Shortspine Thornyhead	CW	1,014	861	856
2027	Splitnose	S of 40° 10'	796	620	620
2028	Splitnose	S of 40° 10'	796	620	620
2027	Starry Flounder	CW	652	393	393
2028	Starry Flounder	CW	652	393	393
2027	Widow Rockfish	CW	4,916	4,596	4,596
2028	Widow Rockfish	CW	5,172	4,810	4,810
2027	Yellowtail Rockfish	N of 40° 10'	5,051	4,723	4,723
2028	Yellowtail Rockfish	N of 40° 10'	4,882	4,540	4,540
2027	Blue/Deacon/Black Rockfish	OR	495	448	448
2028	Blue/Deacon/Black Rockfish	OR	502	452	452
2027	Cabezon/Kelp Greenling	OR	193	174	174
2028	Cabezon/Kelp Greenling	OR	193	173	173
2027	Cabezon/Kelp Greenling	WA	19	14	14
2028	Cabezon/Kelp Greenling	WA	19	14	14
2027	Nearshore Rockfish North	N of 40° 10'	104	85	85
2028	Nearshore Rockfish North	N of 40° 10'	103	83	83
2027	Nearshore Rockfish South	S of 40° 10'	1,145	929	928
2028	Nearshore Rockfish South	S of 40° 10'	1,145	925	924
2027	Other Fish	CW	286	223	223
2028	Other Fish	CW	286	223	223
2027	Other Flatfish	CW	9,367	6,577	6,577
2028	Other Flatfish	CW	8,950	6,193	6,193
2027	Shelf Rockfish North	N of 40° 10'	1,673	1,342	1,342
2028	Shelf Rockfish North	N of 40° 10'	1,665	1,333	1,333
2027	Shelf Rockfish South	S of 40° 10'	1,832	1,457	1,456
2028	Shelf Rockfish South	S of 40° 10'	1,831	1,453	1,453
2027	Slope Rockfish North	N of 40° 10'	1,966	1,623	1,623
2028	Slope Rockfish North	N of 40° 10'	1,952	1,602	1,602

| 2027 | Slope Rockfish South | S of 40° 10' | 878 | 699 | 699 |
| 2028 | Slope Rockfish South | S of 40° 10' | 877 | 696 | 696 |

2.3 Comparison of No Action to Alternative 1

Table 3 is provided as a reference point for comparison between the No Action and Alternative 1 ACLs. Of the 28 stocks and 10 stock complexes with preliminary ACLs under Alternative 1, ACLs increase for 11 stocks and 4 stock complexes. The ACLs for 17 stocks and 5 stock complexes decrease and the ACLs for the remaining stock and 1 stocks and 1stock complexes show no change. Pacific whiting is not included in these counts as the 2027/2028 ACLs are not yet known.

Table 3: Comparison of 2025 (No Action) and 2027 and 2028 groundfish annual catch limits (ACLs) under default harvest control rules (Alternative 1). Stocks and complexes with a greater than 50% change in the ACL from 2025 to 2027 in bold.

Stock	FMU	2025 ACL (mt)	2027 ACL (mt)	2028 ACL (mt)	Percent Difference
QUILLBACK	**CA**	**1**	**12**	**12**	**91.7%**
YELLOWEYE ROCKFISH	**CW**	**56**	**113**	**113**	**50.4%**
Arrowtooth Flounder	CW	11,193	7,947	7,131	-40.8%
Big Skate	CW	1,224	1,155	1,122	-6.0%
Black Rockfish	CA	224	249	261	10.0%
Black Rockfish	WA	245	240	241	-2.1%
Bocaccio	S of 40° 10'	1,681	2,288	2,185	26.5%
Cabezon	CA	162	150	146	-8.0%
California Scorpionfish	CW	244	233	229	-4.7%
Canary Rockfish	CW	571	606	623	5.8%
Chilipepper	S of 40° 10'	2,815	2,986	2,870	5.7%
Cowcod	S of 40° 10'	77	74	73	-4.1%
Darkblotched Rockfish	CW	754	773	754	2.5%
Dover Sole	CW	47,424	38,573	35,616	-22.9%
English Sole	**CW**	**8,884**	**3,168**	**3,168**	**-180.4%**
Lingcod	N of 40° 10'	3,631	3,482	3,439	-4.3%
Lingcod	S of 40° 10'	748	789	796	5.2%
Longnose Skate	CW	1,616	1,546	1,515	-4.5%
Longspine Thornyhead	N of 34° 27'	2,050	1,878	1,834	-9.2%
Longspine Thornyhead	S of 34° 27'	648	593	579	-9.2%
Pacific Cod	CW	1,600	1,600	1,600	0.0%
Pacific Ocean Perch	N of 40° 10'	3,328	3,123	3,036	-6.6%
Pacific Spiny Dogfish	CW	1,361	1,278	1,240	-6.5%
Pacific Whiting	CW	295,520			
Petrale Sole	CW	2,354	2,449	2,423	3.9%
Sablefish	**N of 36**	**28,688**	**10,962**	**11,856**	**-161.7%**
Sablefish	**S of 36**	**7,857**	**3,002**	**3,247**	**-161.7%**
Shortspine Thornyhead	CW	815	847	856	3.8%

Splitnose	S of 40° 10'	1,508	620	620	-143.2%
Starry Flounder	CW	392	393	393	0.3%
Widow Rockfish	**CW**	**11,237**	**4,596**	**4,810**	**-144.5%**
Yellowtail Rockfish	N of 40° 10'	6,241	4,723	4,540	-32.1%
Blue/Deacon/Black Rockfish	OR	423	448	452	5.6%
Cabezon/Kelp Greenling	OR	177	174	173	-1.7%
Cabezon/Kelp Greenling	WA	15	14	14	-7.1%
Nearshore Rockfish North	N of 40° 10'	88	85	83	-3.5%
Nearshore Rockfish South	S of 40° 10'	932	928	924	-0.4%
Other Fish	CW	223	223	223	0.0%
Other Flatfish	CW	7,974	6,577	6,193	-21.2%
Shelf Rockfish North	N of 40° 10'	1,330	1,342	1,333	0.9%
Shelf Rockfish South	S of 40° 10'	1,457	1,456	1,453	-0.1%
Slope Rockfish North	N of 40° 10'	1,488	1,623	1,602	8.3%
Slope Rockfish South	S of 40° 10'	693	699	696	0.9%

2.4 Stocks with Alternative Harvest Specifications

In September 2025, the Council requested projections for a range of alternative harvest control rules for detailed analysis for seven species: canary rockfish, chilipepper rockfish south of 40 10' N. lat, Petrale sole, rougheye/blackspotted rockfish, shortspine thornyhead, yelloweye rockfish, and yellowtail rockfish north of 40 10' N. lat. In November 2025 and March 2026, the Council adopted these alternative HCRs to inform a range of alternative harvest control rules for detailed analysis and selected their preliminary preferred alternatives for all stocks. The Preliminary Preferred Alternative (PPA) 2027 and 2028 harvest specifications include the Alternative 1 default HCRs for all stocks and stock complexes (Section 5), except Alternative 2 for the seven stocks (see Table 4), and excluding widow rockfish. Widow rockfish alternative harvest specifications are being considered under a separate agenda item (C.3). Note that the PPA selection for chilipepper and rougheye/blackspotted impact the complex specifications for shelf rockfish north and both slope rockfish complexes north and south (see Table 5).

Table 4: Alternative 2027 and 2028 harvest specifications (mt) for select U.S. West Coast groundfish stocks; No Action is the 2025 harvest specification for comparison purposes, Alternative 1 is the default harvest control rule, and Alternative 2 are the alternative harvest control rules under consideration and selected by the Council as the PPA in November 2025 and March 2026.

Stock	Area	Alternative	2025			2027			2028			Description
			OFL	ABC	ACL	OFL	ABC	ACL	OFL	ABC	ACL	
Canary Rockfish	CW	No Action	647	605	571							
		Alt 1				694	643	606	721	665	623	
		Alt 2				694	643	643	720	664	664	P* = 0.45, 40-10 rule not applied
Chilipepper	N of 40° 10'	No Action	235	212	212							
		Alt 1				240	225	225	232	216	216	
		Alt 2				240	225	148	239	222	148	P* = 0.45, Constant ACL=2,114 mt, Apportioned 9% to N of 40 10' N. lat., 93% to S of 40 10' N. lat.
	S of 40° 10'	No Action	3,128	2,815	2,815							
		Alt 1				3,194	2,986	2,986	3,086	2,870	2,870	
		Alt 2				3,194	2,986	1,966	3,170	2,948	1,966	P* = 0.45, Constant ACL=2,114 mt, Apportioned 9% to N of 40 10' N. lat., 93% to S of 40 10' N. lat.
Petrale Sole	CW	No Action	2,518	2,354	2,354							
		Alt 1				2,645	2,449	2,449	2,628	2,423	2,423	
		Alt 2				2,645	2,489	2,489	2,619	2,489	2,489	Constant ABC/ACL=2,489 mt
Rougheye/Blackspotted	N of 40° 10'	No Action	233	185	185							
		Alt 1				947	827	827	936	810	810	
		Alt 2				947	827	294	948	819	294	P* = 0.45, Constant ACL=300 mt, Apportioned 98% to N of 40 10' N. lat., 2% to S of 40 10' N. lat.

Species	Area	Alternative										Notes
	S of 40° 10'	No Action	5	4	4							
		Alt 1				19	17	17	19	17	17	
		Alt 2				19	17	6	19	17	6	P* = 0.45, Constant ACL=300 mt, Apportioned 98% to N of 40 10' N. lat., 2% to S of 40 10' N. lat.
Shortspine Thornyhead	CW	No Action	940	821	815							
		Alt 1				994	852	847	1,014	861	856	
		Alt 2				994	902	902	1,013	902	902	Constant ABC/ACL=902 mt
Yelloweye Rockfish	CW	No Action	106	87	56							
		Alt 1				129	113	113	131	113	113	
		Alt 2				129	113	85	132	114	85	P* = 0.4, Constant ACL=85 mt
Yellowtail Rockfish	N of 40° 10'	No Action	6,866	6,241	6,241							
		Alt 1				5,051	4,723	4,723	4,882	4,540	4,540	
		Alt 2				5,051	5,050	5,050	4,859	4,730	4,730	Ad-Hoc Phase In

Table 5: Alternative 2027 and 2028 harvest specifications (mt) for select complexes impacted by the Council's PPA for chilipepper and rougheye/blackspotted rockfish; No Action is the 2025 harvest specification for comparison purposes, Alternative 1 is the default harvest control rule, and Alternative 2 is the alternative harvest control rules under consideration and selected by the Council as the PPA in November 2025 and March 2026.

Stock	Alternative	2025			2027			2028		
		OFL	ABC	ACL	OFL	ABC	ACL	OFL	ABC	ACL
Shelf Rockfish North	No Action HCR	1,669	1,330	1,330						
	Alternative 1				1,673	1,342	1,342	1,665	1,333	1,333
	Alternative 2				1,673	1,342	1,265	1,671	1,339	1,265
Slope Rockfish North	No Action HCR	1,779	1,488	1,488						
	Alternative 1				1,966	1,623	1,623	1,952	1,602	1,602
	Alternative 2				1,966	1,623	1,089	1,964	1,612	1,086
Slope Rockfish South	No Action HCR	866	693	693						
	Alternative 1				878	699	699	877	696	696
	Alternative 2				878	699	688	877	696	685

2.4.1 Alternative Harvest Specifications for Canary Rockfish

The default HCR informing Alternative 1 for canary rockfish is to apply a P* of 0.45, with the ACL set below the ABC due to application of the 40-10 rule (i.e. because the stock is below the target of 40% unfished biomass) (Table 3, Agenda Item G.3 Attachment 14, September 2025). In Alternative 2, the ABC is set equal to the ACL (i.e., no application of the 40-10 rule) which would align with the 2026 emergency rule (91 FR 2714). (Agenda Item D.6, Attachment 1, March 2026)

See Section 3.1.1.1 for the comparison of stock-specific biological impacts related to the policy choice between Alternatives 1 and 2.

2.4.2 Alternative Harvest Specifications for Chilipepper Rockfish

The default HCR informing Alternative 1 for chilipepper rockfish is to apply a P* of 0.45 and set the ACL equal to the ABC (Table h, Agenda Item G.3 Attachment 3, September 2025). The Council also wanted to explore a constant ACL = 2,114 mt (long-term equilibrium yield based on a spawning potential ratio harvest rate [SPR50%]) for 2027-2028 and then revert back to a default harvest control rule with a P* of 0.45 and ABC = ACL (Agenda Item G.6.a Supplemental GMT Report 3 Sept 2025).(Agenda Item D.6, Attachment 2, March 2026) The Alternative 2 PPA was intended to provide more stable ACLs over the long term without constraining the fishery.

Chilipepper rockfish are currently managed south of 40º 10' N. latitude (roughly Cape Mendocino, California) with a species-specific harvest specification and in the area north of 40º 10' N. latitude as a component stock in the northern shelf rockfish complex. Harvest specifications are apportioned north (7%) and south (93%) based on average historical landings.

See Section 3.1.1.2 for the comparison of stock-specific biological impacts related to the policy choice between Alternatives 1 and 2.

2.4.3 Alternative Harvest Specifications for Petrale Sole

The default HCR informing Alternative 1 for petrale sole is to apply a P* of 0.45 and set the ACL equal to the ABC (Table 2, Agenda Item G.3 Attachment 13, September 2025). The Council also wanted to explore an alternative harvest control rule with an ad-hoc phase in approach setting a constant ACL of 2,489 mt (revised 2026 ACL value adopted at the September 2025 Council meeting), for 2027-28 only and then reverting to the default HCR of ABC = ACL with a P* of 0.45. Agenda Item D.6., Attachment 3, March 2026 This ad-hoc approach to 2027-28 harvest specifications is due to anticipated constraints to the fishery, particularly the bottom trawl fleet.

See Section 3.1.1.3 for the comparison of stock-specific biological impacts related to the policy choice between Alternatives 1 and 2.

2.4.4 Alternative Harvest Specifications for Rougheye/Blackspotted

The default HCR informing Alternative 1 is to apply a P* of 0.45 with the ACL set equal to the ABC, based on a category 2 default sigma of 1.0 (Table ix pg xviii; Agenda Item G.3 Revised Attachment 4 September 2025).

In Alternative 2, the Council requested a second precautionary harvest control rule using an ad-hoc phase in approach setting a constant ACL of 300 mt (~ maximum reported in the Groundfish Expanded Mortality Multi-year [GEMM] data product), for 2027-28 only and then reverting to the

default HCR of ABC = ACL with a P* of 0.45 ([Agenda Item G.6.a Supplemental GAP Report 1 Sept 2025](#)), [Table 3-B, Agenda Item F.3 Attachment 2, November 2025](#)).

Rougheye and blackspotted rockfish are currently managed north and south of 40º 10' N. latitude (roughly Cape Mendocino, California) as a component stock in the slope rockfish complexes. Coastwide OFLs are apportioned north (98%) and south (2%) based on average landings during 1985-2012.

See [Section 3.1.1.4](#) for the comparison of stock-specific biological impacts related to the policy choice between Alternatives 1 and 2.

2.4.5 Alternative Harvest Specifications for Shortspine Thornyhead

The default HCR informing Alternative 1 for shortspine thornyhead is to apply a P* of 0.45, with the ACL set below the ABC due to application of the 40-10 rule (i.e. because the stock is below the biomass target of 40%) (Table 3, [Agenda Item G.3 Attachment 15, September 2025](#)).

In Alternative 2, an ad-hoc phase in approach is used to set a constant ABC = ACL of 902 mt (ABC for 2026), for 2027-28 only and then reverting to the default HCR with a P* of 0.45. Given that 2027-2028 ACLs are anticipated to constrain the commercial fishery, this approach may allow the fishery to adjust to lower limits without exceeding the OFL ([Agenda Item G.6.a Supplemental GMT Report 3 Sept 2025](#), [Table 1, Agenda Item F.3 Attachment 3, November 2025](#)).

See [Section 3.1.1.5](#) for the comparison of stock-specific biological impacts related to the policy choice between Alternatives 1 and 2.

2.4.6 Alternative Harvest Specifications for Yelloweye Rockfish

The default HCR informing Alternative 1 is to apply a P* of 0.40 with the ACL set equal to the ABC, based on a category 1 default sigma of 0.5 (Table vii pg xvi; [Agenda Item G.3 Attachment 6 September 2025](#)).

In Alternative 2, the Council requested to explore a more precautionary harvest control rule given the stock status is just above the management target and coming out of rebuilding ([Agenda Item G.6.a Supplemental GMT Report 3 Sept 2025](#)) ([Agenda Item D.6, Attachment 4, March 2026](#)). Alternative 2 would use an ad-hoc phase in approach setting a constant ACL of 85 mt (~ value between the 2026 and 2027 ACL under the default HCR), for 2027-28 only and then reverting to the default HCR of ABC = ACL with a P* of 0.40. This Alternative is viewed as providing higher ACLs for the coming biennium, while still balancing a precautionary approach.

See [Section 3.1.1.6](#) for the comparison of stock-specific biological impacts related to the policy choice between Alternatives 1 and 2.

2.4.7 Alternative Harvest Specifications for Yellowtail Rockfish (North of 40 10 N. lat.)

The default HCR informing Alternative 1 for yellowtail rockfish is to apply a P* of 0.45 and set the ACL equal to the ABC (Table vii pg xvi, [Agenda Item G.3 Attachment 1, September 2025](#)).

The Council also wanted to explore an Alternative 2 ad-hoc phase-in approach, with a 2027 ABC = ACL of 5050 mt (just below the default OFL), for 2028 using a mid-point of the newly calculated OFL and ABC = ACL, and for 2029 ABC = ACL returning to the default value ([Agenda Item G.6.a Supplemental GAP Report 1 Sept 2025](#))([Agenda Item D.6, Attachment 5, March 2026](#)). The

fishery has changed since the 2017 assessment, and commercial catches have increased with the rebound of the midwater trawl fishery which is dependent on yellowtail rockfish. Due to anticipated constraints, Alternative 2 was requested to explore an ad-hoc 3-year phase in approach designed to reduce the impact of the default HCR across 2027-2028.

See Section 3.1.1.7 for the comparison of stock-specific biological impacts related to the policy choice between Alternatives 1 and 2.

2.4.8 The Preferred Alternative

The Council's preferred harvest specification alternative will be provided after the Council makes a final preferred alternative (FPA) decision scheduled in April 2026.

2.4.9 Alternatives Considered but Not Analyzed Further

In September 2025, the Council requested two alternative HCRs be analyzed for rougheye/blackspotted rockfish- one with the ACL set at the equilibrium MSY associated with the SPR proxy of 519 mt and the other with an ACL=300 mt. Based on the recommendations of the GAP and GMT in November 2025, the Council removed the equilibrium MSY alternative from the range.

3. Direct and Indirect Effects of the Alternatives

3.1 Impacts of Harvest Specifications

This section evaluates how alternative harvest specifications affect the future status of actively managed groundfish stocks. Harvest specifications are by themselves management objectives with no direct effect on the environment. Harvest specifications indirectly affect managed groundfish stocks by setting limits on how much of each stock may be caught. It is important to note that the stock assessments and projections underlying this evaluation assume that ACLs are fully attained during the projection period as a default; that is, realized catch equals the ACL. For most stocks, however, catch has historically been less than the ACL. If roughly similar patterns persist in the 2027-2028 biennial period, the actual impact of fishing mortality on the future status of most stocks is likely to be less than is forecast in the assessment projections.

There are seven stocks with preliminary preferred alternative HCRs that depart from the default HCRs used for 2027-2028 harvest specifications. Alternative 2 harvest specifications represent the preliminary preferred alternatives for canary rockfish, chilipepper rockfish, petrale sole, rougheye/blackspotted rockfish, shortspine thornyhead, yelloweye rockfish, and yellowtail rockfish north of 40 10' N. lat.

Stock-specific biological impacts associated with the alternatives analyzed for the three stocks tasked for detailed analysis are provided in Section 3.1.1. Higher ACLs can provide greater economic benefits and reduce bycatch constraints, but can also increase conservation risks, especially when a stock assessment's estimates of spawning biomass (or spawning output) and fraction of unfished biomass are more uncertain. Stock assessors provide projections under higher and lower harvest strategies (e.g., P* =0.45 vs. P* =0.40, respectively) to compare how they affect spawning biomass annually over the next ten years, taking into consideration any uncertainty around stock size and status.

3.1.1 Stocks with Alternative Harvest Control Rules under Consideration

3.1.1.1 Canary Rockfish

The 2023 full benchmark assessment for canary rockfish encompassed a single area along the U.S. West Coast (Langseth, et al. 2023). The SSC endorsed the 2023 stock assessment and supported a category 1 designation for canary rockfish with a default sigma of 0.5. Catch-only projections were done in 2025 based on the 2023 benchmark assessment, which updated recent years catch, and also contained options for projecting changes to 2026 harvest specifications as well (Agenda Item G.3 Attachment 14, September 2025). In September 2025, the Council recommended emergency action to change the 2026 harvest specifications for canary rockfish to ABC=ACL (i.e., no application of the 40-10 rule). The emergency rule was implemented on January 25, 2026 (91 FR 2714).

Uncertainty in the decision table was based on natural mortality (Table 24 in Langseth, et al. 2023). Uncertainty in the forecasted 10-year projections is essentially based on uncertainty around the 2023 OFL and corresponds to the lower and upper quantiles of natural mortality values. Thus, the uncertainty interval encompasses the potential low state of nature (i.e. if the stock forecast was incorrectly lower than assumed by the base model), to the mid (base model used), to the potential high state of nature (i.e. if the stock forecast was incorrectly higher than assumed by the base model). Specifically, the low state of nature was based on a single M sensitivity run where the high state was based on the M ramp. This approach of alternative model configurations was selected because the authors believed it captured structural uncertainty for modeling the stock compared to the typical method of percentages around a single structural model. Under all three states of nature, the depletion declines over time under the default HCR and increases at the end of the 10-year projection. However, the low state of nature shows the stock below the MSST for groundfish (25 percent) meaning the stock is overfished. The base case shows the stock remaining in the precautionary zone, where the high state of nature shows the stock above B40 until 2029 and then being in the precautionary zone until 2034. Note, the 2025 catch only projections do not provide projections under the low and high states of nature.

Projections from the stock assessment for 2027 and beyond are based on a spawning potential ratio (SPR) of 50 percent and the 40:10 rule if applicable (Table 6). For both Alternative 1 (default HCR) and 2 (ABC=ACL), the trajectory is the similar for the spawning output (Figure 1) and depletion (Figure 2) as the stock remains in the precautionary zone over the 10-year projection period even though Alternative 2 permits a higher amount of harvest in 2027 and 2028 (Table 6). Therefore, the choice between Alternatives will not impact the overall stock status in the projection period.

Table 6: Canary rockfish harvest specifications from 2025 catch-only projections (based on the 2023 full assessment, sigma = 0.5, removals set to projected ACL) under P* harvest control rules of 0.45 with the 40-10 rule applied (ABC > ACL; Alternative 1) and without the 40-10 rule applied (ABC = ACL for 2027-28; Alternative 2).

| Alt	Year	OFL	ABC	ACL	Spawning Output	Fraction Unfished
Alt 1 P*=0.45 (ABC>ACL, 40-10 rule)	2026	673	626	626	2,762.25	0.345
	2027	694	643	606	2,725.46	0.340
	2028	721	665	623	2,683.02	0.335
	2029	754	691	644	2,643.67	0.330
	2030	789	720	667	2,616.94	0.327
	2031	823	748	692	2,610.00	0.326
	2032	855	773	717	2,624.92	0.328
	2033	883	795	741	2,658.81	0.332
	2034	907	813	764	2,706.48	0.338
	2035	927	827	784	2,762.72	0.345
	2036	943	836	800	2,823.27	0.353
Alt 2 P*=0.45 (ABC= ACL)	2026	673	626	626	2,762.00	0.345
	2027	694	643	643	2,725.00	0.340
	2028	720	664	664	2,680.00	0.335
	2029	751	689	640	2,637.00	0.329
	2030	786	717	664	2,610.00	0.326
	2031	820	746	689	2,602.00	0.325
	2032	852	771	714	2,617.00	0.327
	2033	881	793	739	2,650.00	0.331
	2034	905	811	761	2,698.00	0.337
	2035	925	825	781	2,754.00	0.344
	2036	942	835	797	2,815.00	0.351
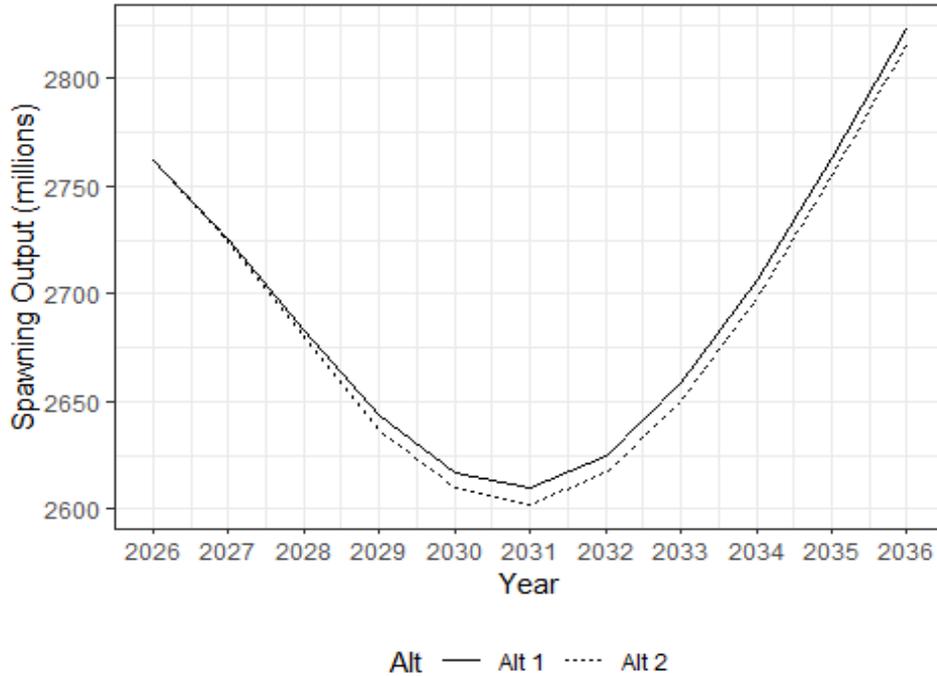
Figure 1: Projected spawning output (millions of eggs) of Canary Rockfish under two alternative HCR, 2026-2036, Alternative 1 is the default HCR (P* = 0.45, ABC>ACL, 40-10 rule applied) and Alternative 2 is the PPA (P* = 0.45, ABC=ACL for 2027-28).

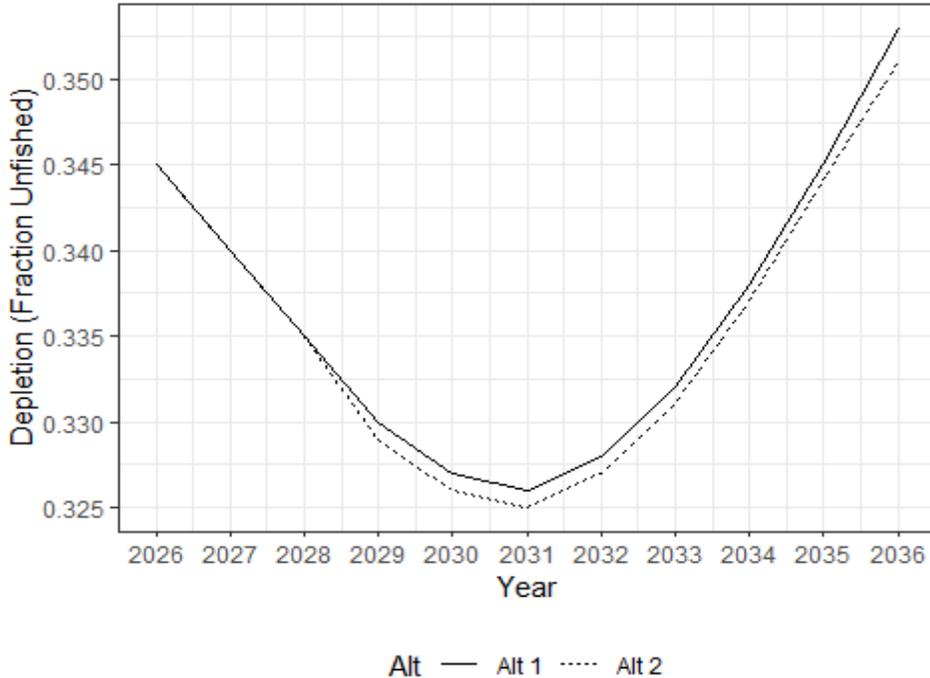**Figure 2: Projected depletion (fraction unfished) of Canary Rockfish under two alternative HCR, 2026-2036, Alternative 1 is the default HCR (P* = 0.45, ABC>ACL, 40-10 rule applied) and Alternative 2 is the PPA (P* = 0.45, ABC=ACL for 2027-28).**

3.1.1.2 Chilipepper Rockfish

The 2025 chilipepper rockfish full benchmark assessment was modeled as a single coastwide stock (Dick, et al. 2025). The last full assessment was in 2007, with an update assessment in 2015, followed by catch-only projections to correct errors in historical landings in 2017, and catch-only projections in 2023. The current 2025 assessment estimates the stock is 83% of unfished in 2025, above the 40% unfished management target level, indicating the stock is healthy. The SSC endorsed the 2025 stock assessment and recommended a category 1b designation with a default sigma of 0.5.

Uncertainty in the decision table from the 2025 assessment represents uncertainty around the Beverton-Holt steepness parameter (h). The base model included a fixed steepness of 0.72, with "low-productivity" alternative (h=0.38) and "high-productivity" alternative (h=0.97). The low value of h (0.38) was based on the model estimate of steepness and the high value of h (0.97) was based on an estimate from Beyer et al. (in prep). For all projections, spawning output and depletion estimates decline over the course of the 12-year projection (2025-2036). As described in Dick, et. al 2025, the models that assume high steepness start closer to the estimated unfished level (approximately 95% of the unfished level in 2025) and decline less rapidly than the base model and models with low steepness. The only scenario where spawning output declines below target levels is the low steepness model combined with ABC(ACL) catches, which suggests that depletion could decline to approximately 32% by 2036.

Projections from the stock assessment for 2027 and beyond are based on a spawning potential ratio (SPR) of 50 percent (Table 7). For both Alternative 1 (default HCR) and 2 (2,114 mt for 2027-2028, then ABC=ACL after), the trajectory is the similar for the spawning output (Figure 3) and depletion (Figure 4). Under Alternative 2, the stock is at a higher stock status over the time series due to the lower harvest in 2027 and 2028 (Table 7). Regardless, both alternatives stay above the management target and the choice between Alternatives will not impact the overall stock status in the projection period.

Table 7: Projected chilipepper rockfish harvest specifications under the base model in the 2025 full assessment (sigma = 0.5) under a default harvest control rule with P* = 0.45 and ACL = ABC (Alternative 1) and the ad-hoc phase-in approach with a constant ACL = 2,114 mt for 2027-28 and then reverting to default P* = 0.45 (Alternative 2).

| Alt	Year	OFL	ABC	ACL	Spawning Output	Fraction Unfished
Alt 1 P*=0.45	2027	3,434.3	3,211.1	3,211.1	9,133	0.766
	2028	3,318.1	3,085.8	3,085.8	8,778	0.736
	2029	3,250.8	3,010.3	3,010.3	8,597	0.721
	2030	3,210.7	2,960.2	2,960.2	8,437	0.708
	2031	3,163.1	2,900.5	2,900.5	8,242	0.691
	2032	3,090.3	2,821.4	2,821.4	8,006	0.672
	2033	2,997.8	2,725.0	2,725.0	7,746	0.650
	2034	2,899.1	2,620.8	2,620.8	7,483	0.628
	2035	2,805.2	2,524.7	2,524.7	7,235	0.607
	2036	2,721.5	2,438.5	2,438.5	7,014	0.588
Alt 2 ACL = 2114 (2027-28), Then P*=0.45	2027	3,434.0	3,211.0	2,114.0	9,133	0.766
	2028	3,409.0	3,170.0	2,114.0	9,040	0.758
	2029	3,417.0	3,164.0	3,164.0	9,075	0.761
	2030	3,360.0	3,098.0	3,098.0	8,866	0.744
	2031	3,296.0	3,022.0	3,022.0	8,620	0.723
	2032	3,205.0	2,926.0	2,926.0	8,333	0.699
	2033	3,096.0	2,814.0	2,814.0	8,024	0.673
	2034	2,981.0	2,695.0	2,695.0	7,717	0.647
	2035	2,874.0	2,586.0	2,586.0	7,431	0.623
	2036	2,778.0	2,489.0	2,489.0	7,177	0.602
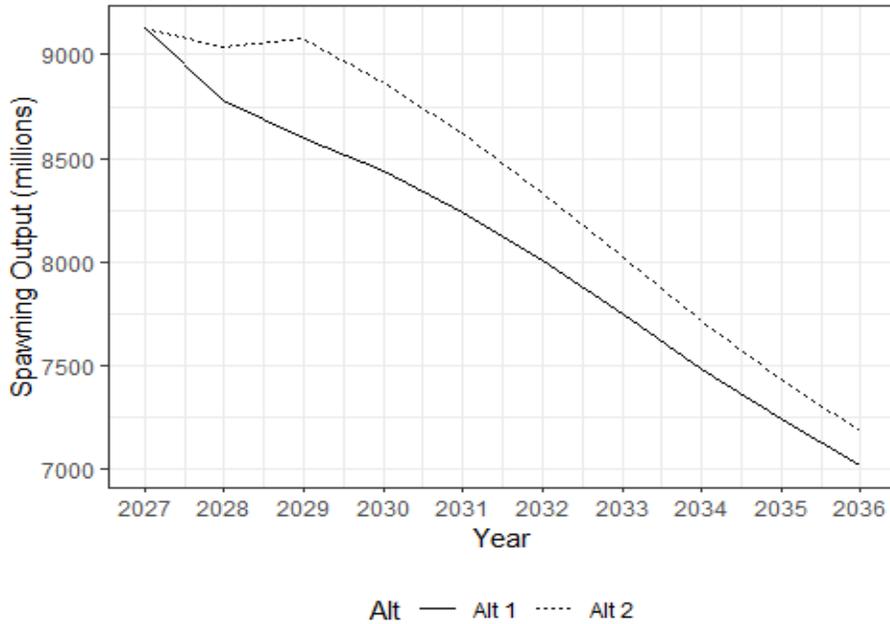
Figure 3: Projected spawning output (millions of eggs) of Chilipepper Rockfish under two alternative HCR, 2026-2036, Alternative 1 is the default HCR (P*=0.45, ABC=ACL) and Alternative 2 is the PPA (ACL=2114 mt for 2027-2028, revert to default in 2029).
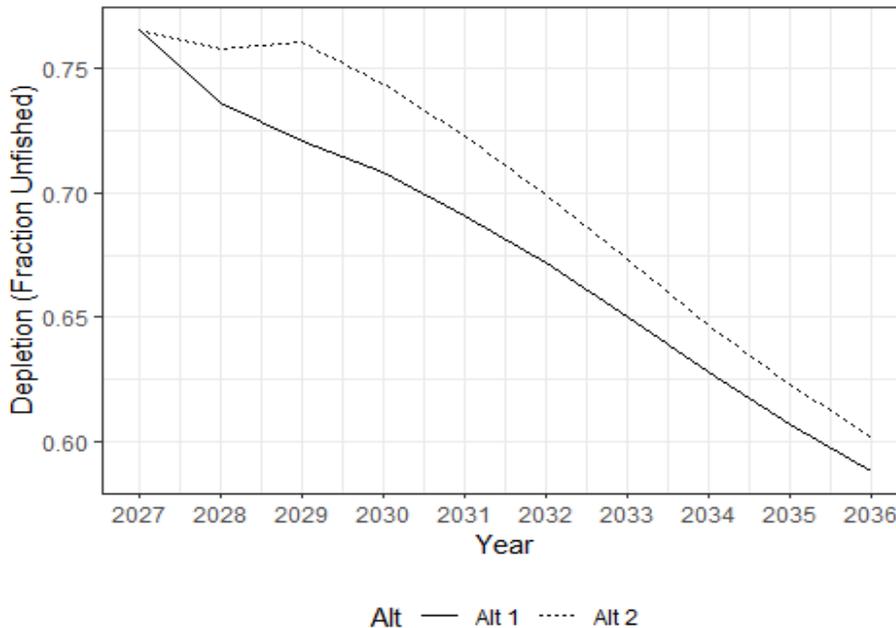

Figure 4: Projection depletion (fraction unfished) of Chilipepper Rockfish under two alternative HCR, 2026-2036, Alternative 1 is the default HCR (P*=0.45, ABC=ACL) and Alternative 2 is the PPA (ACL=2,114 mt for 2027-2028, revert to default in 2029).

3.1.1.3 Petrale Sole

The 2023 full benchmark assessment for petrale sole encompassed a single area along the U.S. West Coast (Taylor, et al. 2023). The SSC endorsed the 2023 stock assessment and supported a

21

category 1 designation with a default sigma of 0.5. Catch-only projections were done in 2025 based on the 2023 benchmark assessment, which updated recent years catch, and also contained options for projecting changes to 2026 harvest specifications as well (Agenda Item G.3 Attachment 13, September 2025).In September 2025, the Council recommended emergency action to change the 2026 harvest specifications for petrale sole to the results of the 2025 catch only projection (i.e., ABC=ACL). The emergency rule was implemented on January 25, 2026 (91 FR 2714).

Uncertainty in the decision table was based on female natural mortality (Table vii in Taylor, et al. 2023). Female natural mortality is estimated within the model and was estimated at M=0.142. For the low and high state of natures, the female natural mortality estimates were calculated using a linear model fit to the spawning output associated with the profile over female M. The low and high values for the spawning output in 2023 were calculated at the 12.5 and 87.5 percent quantiles of the lognormal distribution with the mean equal to the base model estimate. The decision table provides the spawning biomass and depletion under each of the states of nature. Under the base and high states of nature, the depletion declines over time under the default HCR but begins to increase in year 2030. The base case also shows a decline to below the management target (25 percent for flatfish) in the 2023 assessment; however, the 2025 catch only update shows that the stock stays about B25% over the 10-year projection period. Under the low state of nature, the stock is below the management target, but never below MSST (12.5 percent). The 2025 catch only projection did not include the high and low states of nature for comparison.

Projections from the stock assessment for 2027 and beyond are based on a spawning potential ratio (SPR) of 30 percent and the 25:5 rule if applicable (Table 8). For both Alternative 1 (default HCR) and 2 (2,489 mt for 2027-2028, then default HCR), the trajectory is the similar for the spawning output (Figure 5) and depletion (Figure 6) as the stock remains above B25% over the 10-year projection period. However, Alternative 2, with the higher amount of harvest in 2027 and 2028 does remain below the Alternative 1 anticipated depletion until 2034 (Table 8). Therefore, the choice between Alternatives will not impact the overall stock status in the projection period.

Table 8: Projected petrale sole harvest specifications under the base model in the 2023 assessment (sigma = 0.5) under a default harvest control rule with P* = 0.45 and ACL = ABC (Alternative 1) and the ad-hoc phase-in approach with a constant ACL = 2,489 mt for 2027-28 and then reverting to default P* = 0.45 (Alternative 2).

| Alt	Year	OFL	ABC	ACL	Spawning Output	Fraction Unfished
Alt 1 P*=0.45 (ABC=ACL)	2026	2,676	2,489	2,489	6.09	0.266
	2027	2,645	2,449	2,449	5.95	0.260
	2028	2,628	2,423	2,423	5.88	0.257
	2029	2,651	2,431	2,431	5.93	0.259
	2030	2,688	2,454	2,454	6.02	0.263
	2031	2,723	2,475	2,475	6.11	0.267
	2032	2,750	2,486	2,486	6.19	0.270
	2033	2,769	2,492	2,492	6.24	0.273
	2034	2,782	2,493	2,493	6.28	0.274
	2035	2,792	2,491	2,491	6.31	0.275
	2036	2,801	2,484	2,484	6.33	0.276
Alt 2 ACL=2,489 mt (27-28), Then P*=0.45	2026	2,676	2,489	2,489	6.09	0.266
	2027	2,645	2,489	2,489	5.95	0.260
	2028	2,619	2,489	2,489	5.87	0.256
	2029	2,627	2,409	2,409	5.88	0.257
	2030	2,669	2,437	2,437	5.98	0.261
	2031	2,709	2,462	2,462	6.08	0.266
	2032	2,740	2,477	2,477	6.17	0.269
	2033	2,762	2,486	2,486	6.23	0.272
	2034	2,777	2,488	2,488	6.27	0.274
	2035	2,788	2,487	2,487	6.30	0.275
	2036	2,798	2,481	2,481	6.32	0.276
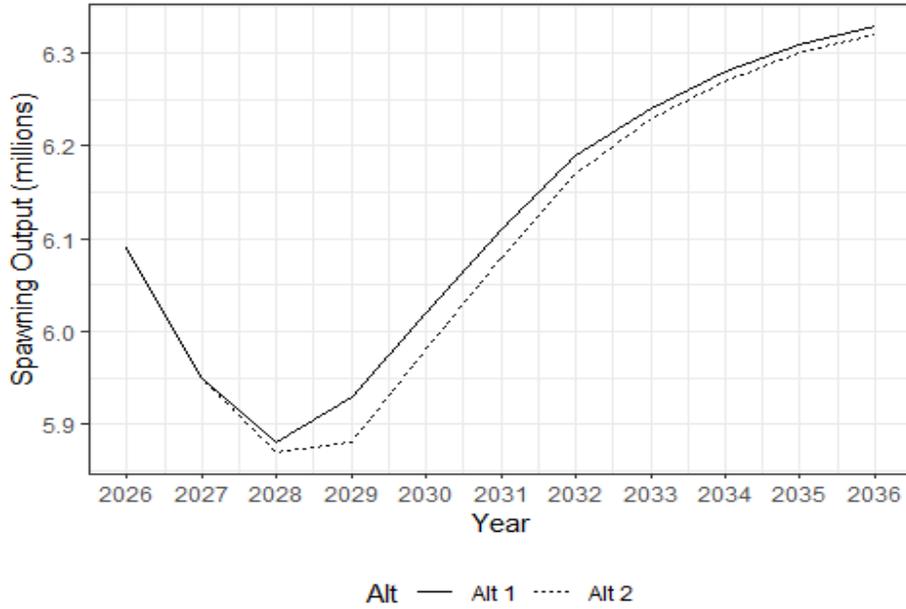
Figure 5: Projected spawning output (millions of eggs) of Petrale sole under two alternative HCR, 2026-2036, Alternative 1 is the default HCR (P*=0.45, ABC=ACL) and Alternative 2 is the PPA (ACL=2,489 mt for 2027-2028, revert to default in 2029).

Figure 6: Projection depletion (fraction unfished) of Petrale sole under two alternative HCR, 2026-2036, Alternative 1 is the default HCR (P*=0.45, ABC=ACL) and Alternative 2 is the PPA (ACL=2,489 mt for 2027-2028, revert to default in 2029).

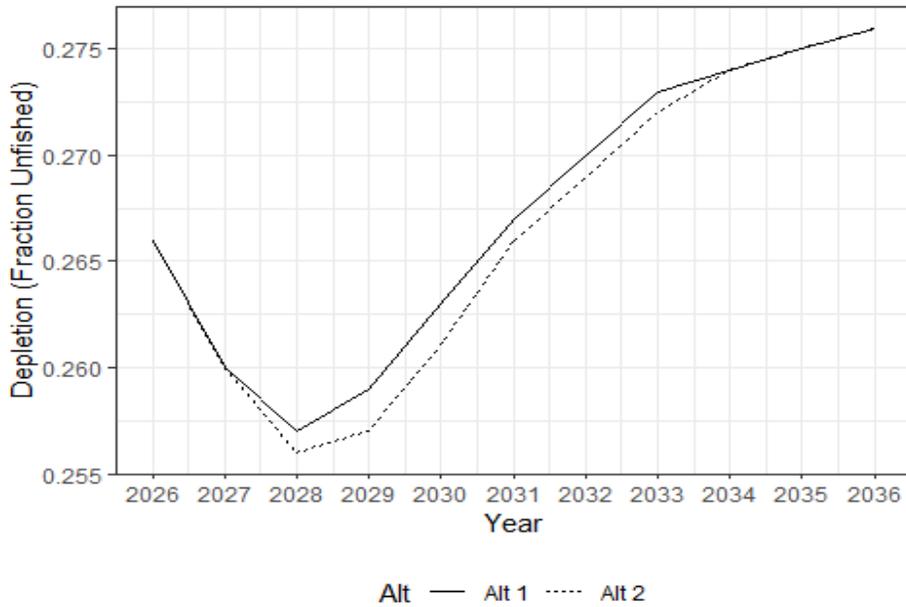*3.1.1.4 Rougheye/Blackspotted Rockfish*

The 2025 rougheye/blackspotted rockfishes assessment was a benchmark assessment (Cope et al. 2025). The SSC endorsed the assessment and recommended a Category 2 designation, with a

default sigma value of 1 for calculating the scientific uncertainty buffer. The update assessment estimates the stock is at 87 percent of unfished spawning output in 2025, above the management target of 40 percent, indicating that the stock is healthy. This conclusion that the stock is well above target levels represents a fairly substantial divergence from the 2013 assessment as the current base model estimated only modest declines in spawning output from the 1980s to the present. However, the STAR panel and the SSC noted that various sources of uncertainty and a lack of a clear method for modifying the default sigma may warrant consideration of a more risk averse approach.

Uncertainty in the decision table from the 2025 assessment represents uncertainty based on male natural mortality. Uncertainty in the forecasted 12-year projections is essentially based on a meta-analytical prior that corresponds to the maximum age of 150 years and corresponds to lower and upper quantiles of natural mortality age. Thus, the uncertainty interval encompasses the potential low state of nature (i.e., if the stock forecast was incorrectly lower than assumed by the base model, calculated to correspond to maximum age of 169 years) and to the potential high state of nature (i.e., if the stock forecast was incorrectly higher than assumed by the base model, calculated to correspond to maximum age of 138 years).

Under any of the states of nature, the fraction of unfished biomass is projected to remain above the 40 percent target within the next twelve years. While projections of the low state of nature does show a decline in the fraction of unfished biomass, it only drops to a low of 50.4 percent, in 2036. With the base model and the update assessment adopted and utilized for projections, the stock remains healthy. Projections from the assessment for 2027 and beyond are based on a spawning potential ratio (SPR) of 50 percent.

For both Alternative 1 (default HCR) and 2 (300 mt ACL for 2027-28, then ABC=ACL), the trajectory is the similar for the spawning output (Figure 7) and depletion (Figure 8) as the stock remains above B40% over the 10-year projection period. However, Alternative 2, with the lower amount of harvest in 2027 and 2028 does result in higher spawning output and depletion compared to Alternative 1 over the time series (Table 9). Therefore, the choice between Alternatives will not impact the overall stock status in the projection period.

Table 9: Projected rougheye/blackspotted rockfish harvest specifications under the base model in the 2025 assessment (sigma = 1.0) under a default harvest control rule with P*= 0.45 and ACL = ABC (Alternative 1) and the ad-hoc phase-in approach with a constant ACL = 300 mt for 2027-28 and then reverting to default P = 0.45 (Alternative 2).

Alt	Year	OFL	ABC	ACL	Spawning Output	Fraction Unfished
Alt 1 P*=0.45 (ABC=ACL)	2027	966	844	844	4.888	0.877
	2028	955	826	826	4.821	0.865
	2029	944	809	809	4.758	0.854
	2030	933	792	792	4.698	0.843
	2031	923	776	776	4.641	0.833
	2032	912	760	760	4.586	0.823
	2033	902	745	745	4.533	0.813
	2034	892	729	729	4.480	0.804
	2035	881	714	714	4.429	0.795
	2036	871	699	699	4.378	0.786
Alt 2 ACL= 300 mt (2027-2028), Then P*=0.45	2027	966	844	300	4.890	0.880
	2028	967	836	300	4.890	0.880
	2029	969	830	830	4.890	0.880
	2030	958	813	813	4.830	0.870
	2031	946	796	796	4.770	0.860
	2032	935	779	779	4.710	0.840
	2033	924	763	763	4.650	0.830
	2034	913	747	747	4.600	0.820
	2035	902	730	730	4.540	0.810
	2036	890	715	715	4.490	0.800
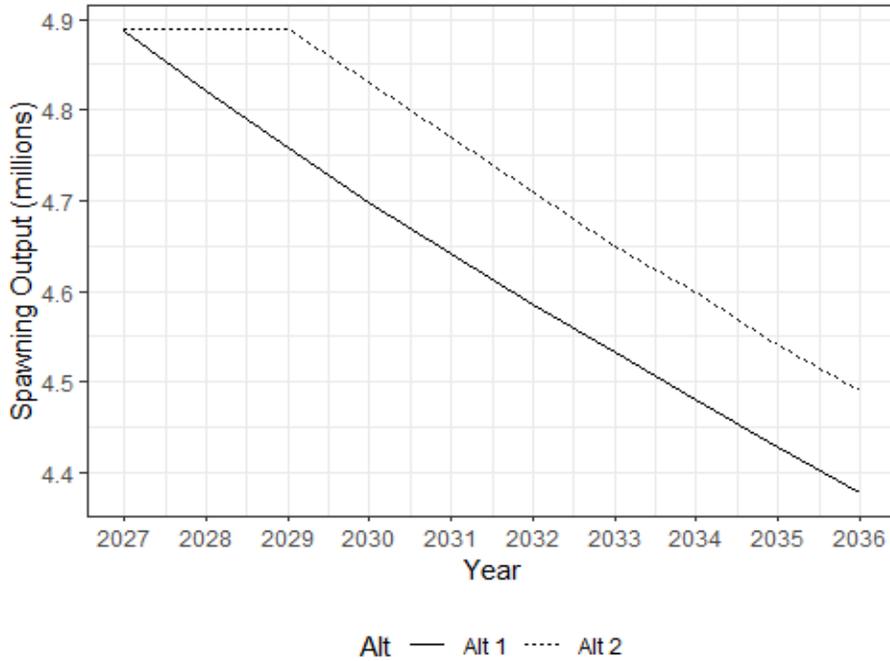
Figure 7: Projected spawning output (millions of eggs) of Rougheye/Blackspotted under two alternative HCR, 2026-2036, Alternative 1 is the default HCR (P*=0.45, ABC=ACL) and Alternative 2 is the PPA (ACL=300 mt for 2027-2028, revert to default in 2029).
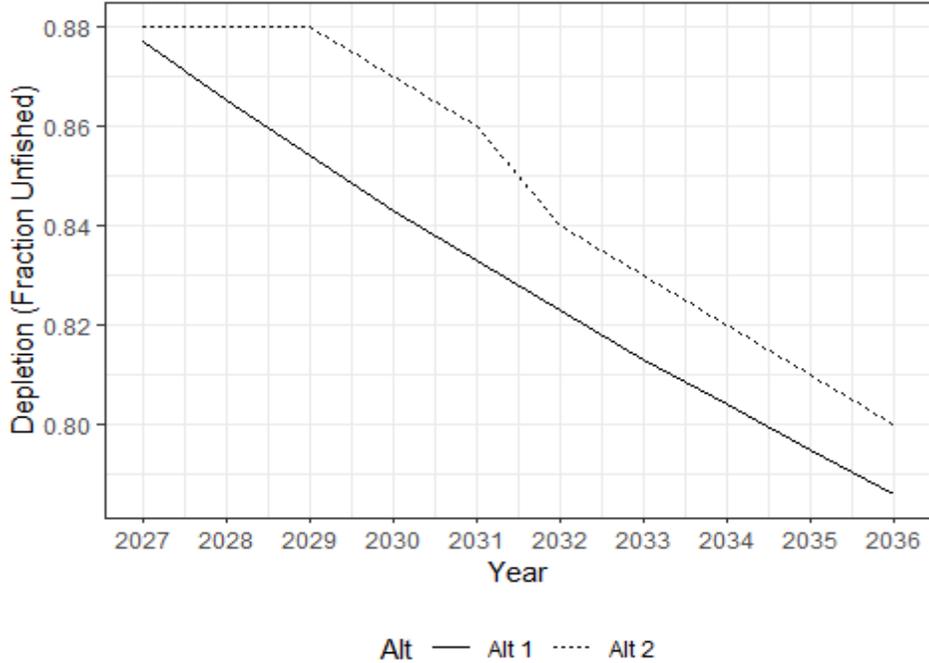

Figure 8: Projection depletion (fraction unfished) of Rougheye/Blackspotted under two alternative HCR, 2026-2036, Alternative 1 is the default HCR (P*=0.45, ABC=ACL) and Alternative 2 is the PPA (ACL=300 mt for 2027-2028, revert to default in 2029).

3.1.1.5 Shortspine Thornyhead

The 2023 shortspine thornyhead assessment was a length-based data-moderate assessment (Zahner, et al. 2023). The assessment estimated that the relative spawning output of the stock is in the precautionary zone, below the management target of 40% of unfished levels. Although recruitment has been relatively stable, spawning output declined considerably from the 1970s to the late 2010s. The SSC endorsed the 2023 stock assessment and recommended a category 2 designation with a default sigma of 1.0. Catch-only projections were done in 2025 based on the 2023 assessment, which updated recent years catch, and also contained options for projecting changes to 2026 harvest specifications as well (Agenda Item G.3 Attachment 15, September 2025). In September 2025, the Council recommended emergency action to change the 2026 harvest specifications for shortspine thornyhead using an ad-hoc phase in where the ABC was set at 902 mt and the ACL at 897 mt. The emergency rule was implemented on January 25, 2026 (91 FR 2714).

The depletion in 2013 was estimated to be 43.5%, a large decrease from what was estimated by the 2013 assessment (~75%). The depletion in 2023 was estimated to be 39.4%, representing a fairly substantial divergence from the estimates produced in the 2013 assessment.

Uncertainty in the decision table was based on natural mortality (Table vii in Zahner, et al. 2023). The low state of nature uses $M = 0.03$ to fully encapsulate the low end of the range of M seen in assessments throughout the eastern Pacific. The high state of nature used M=0.5 to encapsulate what was used in the 2013 assessment. Thus, the uncertainty interval encompasses the potential low state of nature (i.e. if the stock forecast was incorrectly lower than assumed by the base model), to the mid (base model used), to the potential high state of nature (i.e. if the stock forecast was incorrectly higher than assumed by the base model).

Under the base model and the default HCR of $P^* = 0.45$, the stock remains between 39 and 40 percent depletion over the entire time series (assuming full attainment of the ACLs). Under the low state of nature, the stock begins above B40 percent and declines to 38.9 percent over the time series. The high state of nature has the stock remaining above B40 percent. The 2025 catch only projection does not provide a decision table, but does provide an updated projection under the base case and the default HCR ($P^* = 0.45$)

Projections from the stock assessment for 2027 and beyond are based on a spawning potential ratio (SPR) of 50 percent and the 40:10 rule if applicable (Table 10). For both Alternatives 1 and 2, the trajectory is the similar for the spawning output (Figure 9) and depletion (Figure 10) as the stock remains in the precautionary zone until 2034 even though Alternative 2 permits a higher amount of harvest in 2027 and 2028 (Table 10). Therefore, the choice between Alternatives will not impact the overall stock status in the projection period.

Table 10: Projected shortspine thornyhead harvest specifications under the base model in the 2023 assessment under a default harvest control rule with P* of 0.45 and ACL < ABC due to the 40-10 rule (Alternative 1) and the ad-hoc phase-in approach with a constant ACL = 902 mt for 2027-28 and then reverting to default P* = 0.45 (Alternative 2).

Alt	Year	OFL	ABC	ACL	Spawning Output	Fraction Unfished
Alt 1 P*=0.45 (ABC > ACL, 40-10 rule)	2027	994	852	847	8,711.82	0.393
	2028	1,014	861	856	8,714.60	0.394
	2029	1,033	869	864	8,724.47	0.394
	2030	1,051	876	872	8,740.84	0.395
	2031	1,068	883	879	8,763.10	0.396
	2032	1,085	887	885	8,790.55	0.397
	2033	1,101	892	890	8,822.65	0.398
	2034	1,116	896	896	8,858.80	0.400
	2035	1,130	898	898	8,898.36	0.402
	2036	1,143	901	901	8,940.98	0.404
Alt 2 P*=0.45 ABC/ACL= 902 mt for 2027-28, then default	2027	994	902	902	8,711.82	0.393
	2028	1,013	902	902	8,710.94	0.393
	2029	1,032	868	863	8,717.58	0.394
	2030	1,050	874	870	8,733.77	0.394
	2031	1,067	881	878	8,755.85	0.395
	2032	1,084	886	884	8,783.13	0.397
	2033	1,099	890	889	8,815.05	0.398
	2034	1,114	895	894	8,851.03	0.400
	2035	1,128	897	897	8,890.43	0.401
	2036	1,142	900	900	8,932.87	0.403
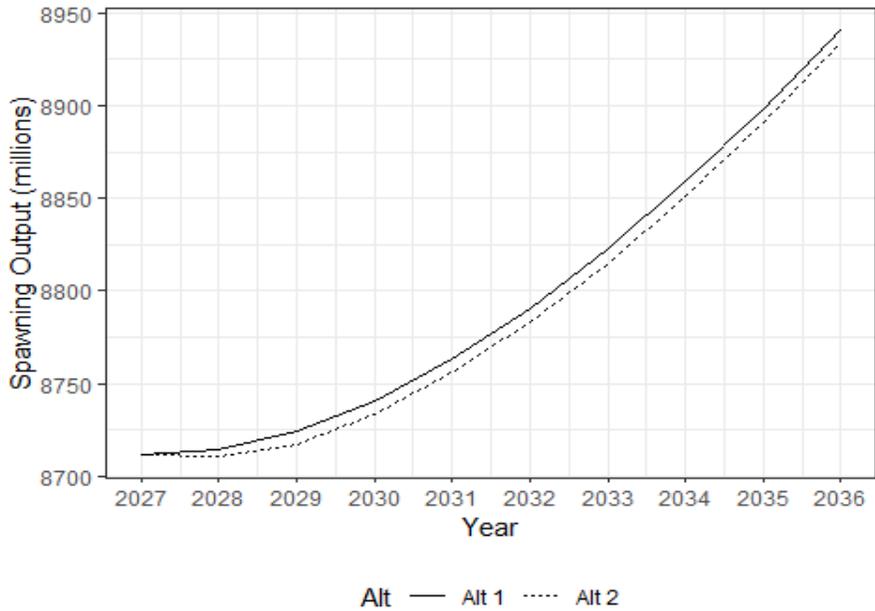
Figure 9: Projected spawning output (millions of eggs) of Shortspine Thornyhead under two alternative HCR, 2026-2036, Alternative 1 is the default HCR (P*=0.45, ABC=ACL) and Alternative 2 is the PPA (ad-hoc phase-in approach with a constant ACL = 902 mt for 2027-28 and then reverting to default P = 0.45).
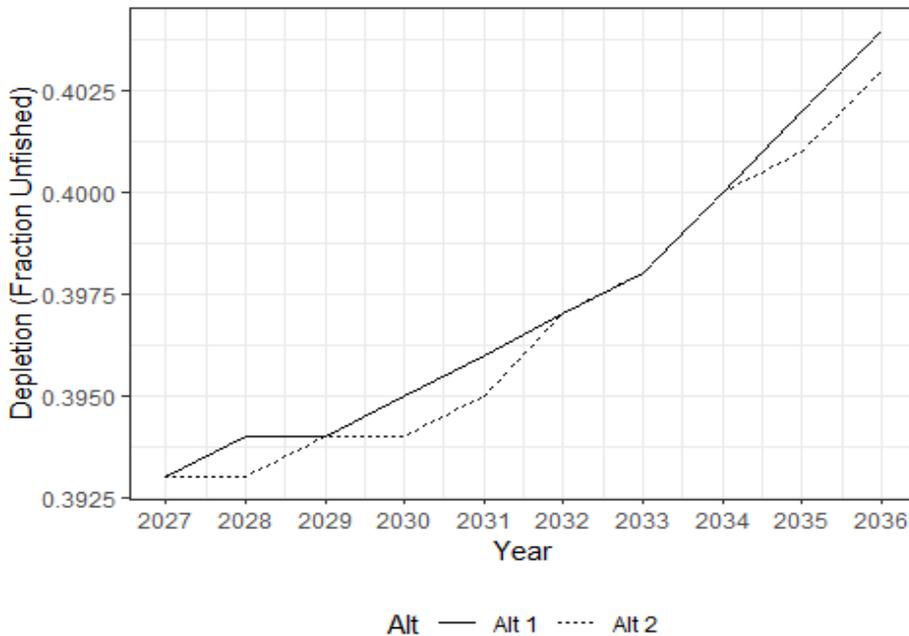

Figure 10: Projection depletion (fraction unfished) of Shortspine Thornyhead under two alternative HCR, 2026-2036, Alternative 1 is the default HCR (P*=0.45, ABC=ACL) and Alternative 2 is the PPA (ad-hoc phase-in approach with a constant ACL = 902 mt for 2027-28 and then reverting to default P = 0.45).

3.1.1.6 Yelloweye Rockfish

The 2025 yelloweye rockfish assessment was an update assessment (Johnston et al. 2025). The SSC endorsed the update assessment and recommended a Category 1 designation, with a default sigma value of 0.5 for calculating the scientific uncertainty buffer. Under the FMP, BMSY is the biomass level that produces maximum sustainable yield (MSY). The update assessment estimates the stock is at 40.1 percent of unfished spawning output in 2025, above the overfished level of 25% and the management target of 40 percent, indicating that the stock is healthy. The SSC noted that although this stock could be considered rebuilt following this update assessment (fraction unfished = 0.401), the particular life history traits of yelloweye rockfish make it particularly vulnerable to fishing (Cope et al. 2011).

Uncertainty in the decision table from the 2025 update assessment represents uncertainty based on natural mortality. Uncertainty in the forecasted 12-year projections is essentially based on the median of the Hamel prior (0.044y -1), estimated using the maximum age of 123 years, and corresponds to lower and upper quantiles of natural mortality age. Thus, the uncertainty interval encompasses the potential low state of nature (i.e., if the stock forecast was incorrectly lower than assumed by the base model, calculated to correspond to the maximum age reported for the Yelloweye Rockfish at the time of the 2017 assessment) and to the potential high state of nature (i.e., if the stock forecast was incorrectly higher than assumed by the base model, calculated to correspond to the 99th percentile of age data available for the 2017 assessment).

Projections from the stock assessment for 2027 and beyond are based on a spawning potential ratio (SPR) of 50 percent (Table 11). For both Alternative 1 (default HCR) and 2 (85 mt ACL for 2027-28, then ABC=ACL), the trajectory is the similar for the spawning output (Figure 11) and depletion (Figure 12). Under Alternative 2, the stock ends up at a higher stock status due to the lower harvest in 2027 and 2028 (Table 11). Therefore, the choice between Alternatives will not impact the overall stock status in the projection period.

Table 11: Projected yelloweye rockfish harvest specifications under the base model in the 2025 update assessment (sigma = 0.5) under a default harvest control rule with P* = 0.40 and ACL = ABC (Alternative 1) and the ad-hoc phase-in approach with a constant ACL = 85 mt for 2027-28 and then reverting to default P* = 0.40 (Alternative 2).

Alt	Year	OFL	ABC	ACL	Spawning Output	Fraction Unfished
Alt 1 P*=0.4 (ABC=ACL)	2027	129.3	112.9	112.9	526.772	0.443
	2028	130.9	113.1	113.1	543.555	0.457
	2029	132.0	113.0	113.0	558.406	0.469
	2030	132.7	112.6	112.6	570.839	0.480
	2031	133.1	111.8	111.8	580.654	0.488
	2032	133.3	110.9	110.9	587.932	0.494
	2033	133.2	109.8	109.8	592.973	0.498
	2034	133.1	108.8	108.8	596.202	0.501
	2035	132.9	107.6	107.6	598.069	0.503
	2036	132.8	106.3	106.3	599.025	0.503
Alt 2 ACL= 85 mt (2027-2028) Then P*=0.40	2027	129.3	112.9	85.0	526.800	0.443
	2028	131.7	113.8	85.0	546.500	0.459
	2029	133.7	114.5	114.5	564.500	0.474
	2030	134.4	114.0	114.0	576.900	0.485
	2031	134.7	113.2	113.2	586.700	0.493
	2032	134.8	112.2	112.2	593.800	0.499
	2033	134.8	111.0	111.0	598.800	0.503
	2034	134.6	110.0	110.0	601.900	0.506
	2035	134.4	108.7	108.7	603.600	0.507
	2036	134.1	107.4	107.4	604.400	0.508

Figure 11: Projected spawning output (millions of eggs) of Yelloweye Rockfish under two alternative HCR, 2026-2036, Alternative 1 is the default HCR (P*=0.40, ABC=ACL) and Alternative 2 is the PPA (ACL=85 mt for 2027-2028, revert to default in 2029).

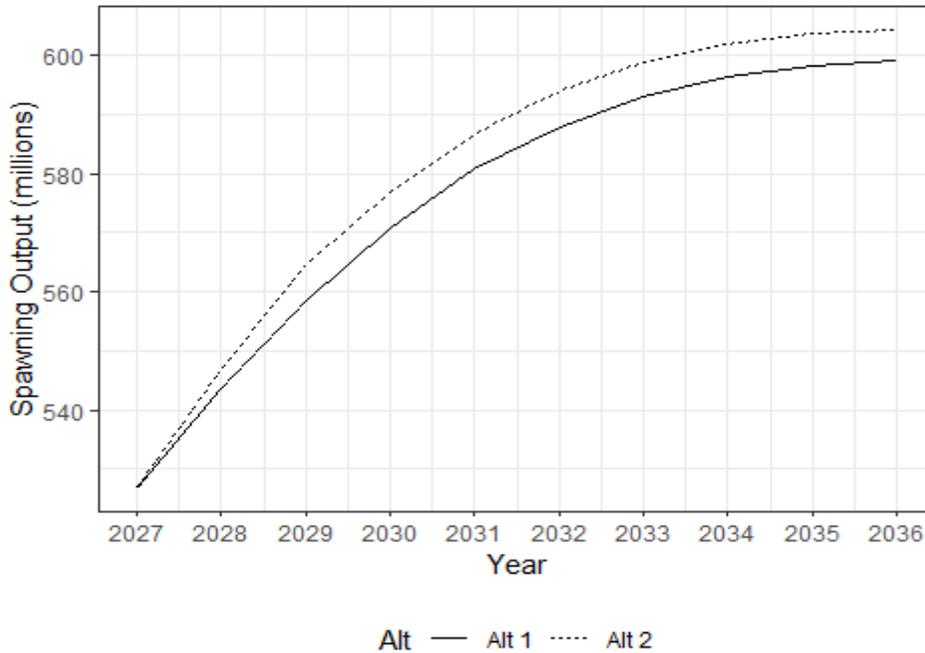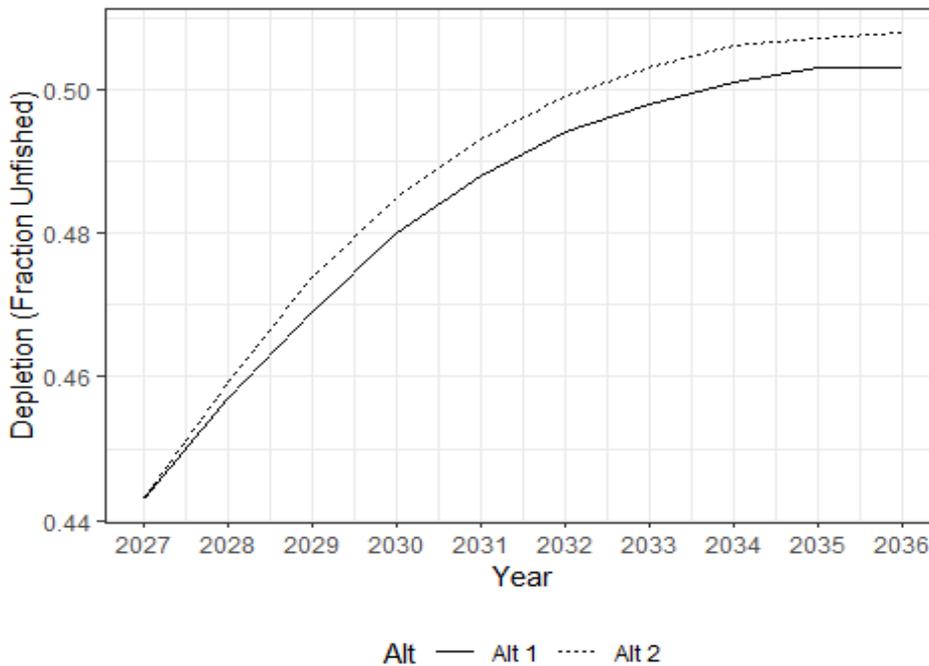**Figure 12: Projection depletion (fraction unfished) of Yelloweye Rockfish under two alternative HCR, 2026-2036, Alternative 1 is the default HCR (P*=0.45, ABC=ACL) and Alternative 2 is the PPA (ACL=85 mt for 2027-2028, revert to default in 2029).**

3.1.1.7 Yellowtail Rockfish (North of 40 10' N. lat.)

The 2025 yellowtail rockfish full benchmark assessment was modeled in the area north of 40º 10' N. Lat. (Oken, et al. 2025), as there is a genetic break in the population at Cape Mendocino. The last full assessment was in 2017. The current 2025 assessment estimates the stock is 62.6% of unfished in 2025, above the 40% unfished management target level, indicating the stock is healthy. The SSC endorsed the 2025 stock assessment and recommended a category 1b designation with a default sigma of 0.5.

Uncertainty in the decision table from the 2025 assessment represents uncertainty based on the unfished recruitment on the log scale (log(Ro)) and around the 2025 OFL. As noted in Oken, et al., 2025, Specifically, the current year spawning biomass for the high and low states of nature are given by the base model mean plus or minus 1.15 standard deviations (i.e., the 12.5th and 87.5th percentiles). A search across fixed values of lnR0 are then used to attain the current year spawning biomass values for the high and low states of nature. The asymptotic standard deviation for the 2025 OFL from the base model was 0.186 and the point estimate of the 2025 OFL was 5,440 mt. The associated 12.5th and 87.5th percentiles were 4,392 mt and 6,739 mt. Model runs from the likelihood profiles for log($R0$) which had OFL values which best matched the values of log(R0)=10.25 and 10.75 for the low and high states of nature respectively. The base model estimate was 10.51. The decision table provides the spawning biomass and depletion under each of the states of nature. Under all three states of nature, the depletion declines over time and then slightly increases in year 2035. All three states of nature show the stock above the management target (B40%)

Projections from the stock assessment for 2027 and beyond are based on a spawning potential ratio (SPR) of 50 percent (Table 12). For both Alternative 1 (default HCR) and 2 (ad-hoc HCR phase in), the trajectory is the similar for the spawning output (Figure 13) and depletion (Figure 14). Under Alternative 2, the stock is at a lower stock status due to the higher harvest in 2027 and 2028 for the majority of the time series (Table 12), but overall stays in a similar state as Alternative 1. Therefore, the choice between Alternatives will not impact the overall stock status in the projection period.

Table 12: Projected yellowtail rockfish (North of 40º 10' N. Lat.) harvest specifications under the base model in the 2025 full benchmark assessment under a default harvest control rule with P* of 0.45 and ACL = ABC (Alternative 1) and ad-hoc phase-in approach, with a 2027 ABC = ACL of 5050 mt (just below the default OFL), for 2028 using a mid-point of the newly calculated OFL and ABC = ACL, and for 2029 ABC = ACL returning to the default value (Alternative 2).

Alt	Year	OFL	ABC	ACL	Spawning Output	Fraction Unfished
Alt 1 P*=0.45, ABC=ACL	2027	5,051	4,723	4,723	8.39	0.575
	2028	4,882	4,540	4,540	7.95	0.545
	2029	4,800	4,445	4,445	7.63	0.523
	2030	4,794	4,421	4,421	7.43	0.509
	2031	4,837	4,435	4,435	7.36	0.504
	2032	4,892	4,467	4,467	7.39	0.506
	2033	4,934	4,485	4,485	7.47	0.512
	2034	4,952	4,476	4,476	7.55	0.517
	2035	4,947	4,452	4,452	7.59	0.520
	2036	4,926	4,414	4,414	7.59	0.520
Alt 2 ACL = 5050 (2027) Then Midpoint 2028,Then Default	2027	5,051	5,050	5,050	8.39	0.575
	2028	4,859	4,730	4,730	7.91	0.542
	2029	4,765	4,413	4,413	7.56	0.518
	2030	4,764	4,393	4,393	7.37	0.505
	2031	4,811	4,412	4,412	7.31	0.501
	2032	4,871	4,447	4,447	7.35	0.503
	2033	4,916	4,469	4,469	7.43	0.509
	2034	4,937	4,463	4,463	7.51	0.515
	2035	4,934	4,441	4,441	7.56	0.518
	2036	4,916	4,405	4,405	7.57	0.519
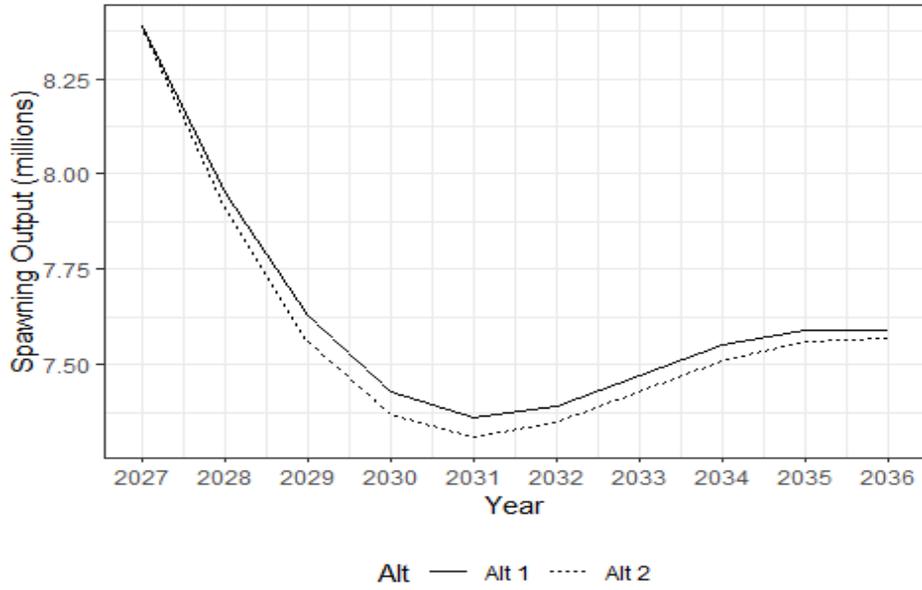
Figure 13: Projected spawning output (millions of eggs) of Yellowtail Rockfish under two alternative HCR, 2026-2036, Alternative 1 is the default HCR (P*=0.45, ABC=ACL) and Alternative 2 is the PPA (ad-hoc phase-in approach, with a 2027 ABC = ACL of 5050 mt (just below the default OFL), for 2028 using a mid-point of the newly calculated OFL and ABC = ACL, and for 2029 ABC = ACL returning to the default value).

Figure 14: Projection depletion (fraction unfished) of Yellowtail Rockfish under two alternative HCR, 2026-2036, Alternative 1 is the default HCR (P*=0.45, ABC=ACL) and Alternative 2 is the PPA (ad-hoc phase-in approach, with a 2027 ABC = ACL of 5050 mt (just below the default OFL), for 2028 using a mid-point of the newly calculated OFL and ABC = ACL, and for 2029 ABC = ACL returning to the default value).
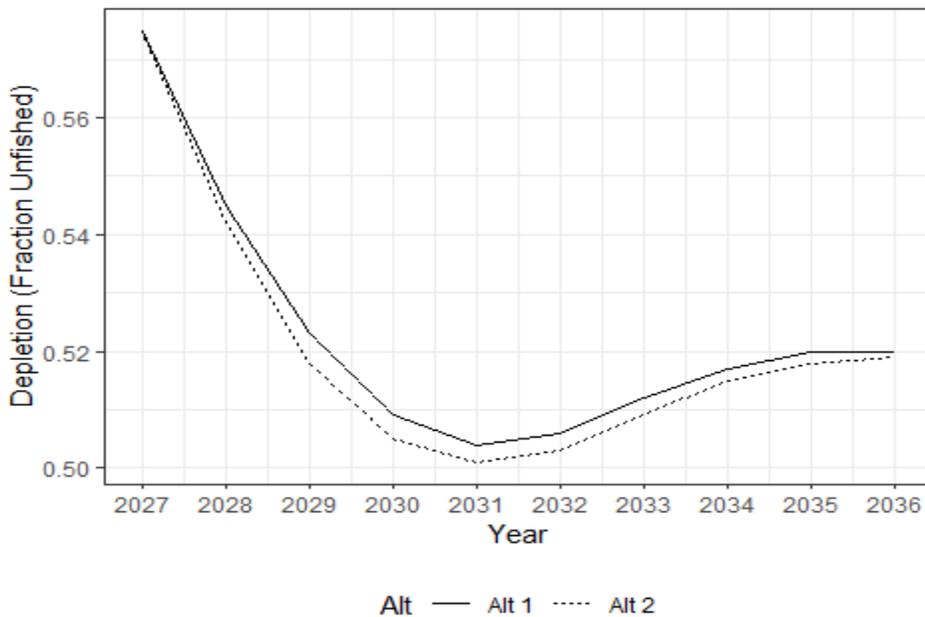
4. Magnuson-Steven Act National Standards

This document includes an analysis of the 20275-286 Pacific coast groundfish harvest specifications and management measures action alternatives considered by the Pacific Fishery Management Council (Council) in relation to the 10 National Standards as contained in the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act [hereafter 'MSA"]), and a brief discussion of how each alternative is consistent with the National Standards, where applicable. In recommending a preferred alternative, the Council must consider how to balance the national standards.

National Standard 1 — Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry.

MSA section 303(a)(3) requires that each Fishery Management Plan (FMP) include an estimate of maximum sustainable yield (MSY) and optimum yield (OY) for the fishery. OY is the quantity of fish that will provide the greatest overall benefit to the U.S., particularly with respect to food production and recreational opportunities, taking into account the protection of marine ecosystems. OY is prescribed as the MSY from the fishery as reduced by any relevant economic, social, or ecological factors; and in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the MSY in such fishery on a continuing basis. The proposed action recommended by the Council (i.e., Alternative 1 for most stocks and Alternative 2 for some stocks) is consistent with the OY harvest management framework described in Chapter 4 of the Pacific Coast Groundfish Fishery Management Plan (Groundfish FMP). Chapter 4 of the Groundfish FMP describes OY as "a decisional mechanism for resolving the MSA's multiple purposes and policies, implementing an FMP's objectives and balancing the various interests that comprise the national welfare." The OYs are based on MSY or MSY as reduced in consideration of social, economic, or ecological factors.

The harvest control rules (HCRs) proposed in the Council's proposed action for the 2027-28 management cycle balance the stock conservation mandate in the MSA and the socioeconomic mandate in National Standard 1 to provide the greatest overall benefit to the U.S., with respect to achieving OY while managing fishery resources consistent with the National Standard 1 Guidelines. The Council selected as their FPA, default HCRs for all stocks and stock complexes except for canary, chilipepper, rougheye/blackspotted, widow, yelloweye, and yellowtail (north of 40°10′ N. lat.) rockfishes; shortspine thornyhead, and petrale sole.

For canary rockfish, the Council's PPA is Alternative 2. This HCR allows for slightly higher harvest relative to the default HCR Alternative 1. The ACL under Alternative 2 is approximately six percent higher than under Alternative 1. Both Alternatives are predicted to increase biomass over the 10-year projection period as the trajectory is the similar for the spawning output and depletion. The projection shows biomass decreasing until 2031 and then increasing after. The stock remains in the precautionary zone over the 10-year projection period. Although Alternative 2 permits slightly higher amount of harvest in 2027 and 2028, neither of the Alternatives are likely to result in overfishing and the projected difference in the fraction unfished would be 0.2 percent at year 10and the ACL under Alternative 1 would be three mt higher than under Alternative 2. Further, the less precautionary HCR under the PPA may offer slight relief and some flexibility to industry; thus, reducing the constraints these ACLs induce on the fishery. Alternative 2 is consistent with National Standard 1.

For chilipepper, the Council's PPA is Alternative 2. The 2025 assessment (Dick et al, 2025) estimated the stock to be at 76.6 percent of unfished biomass. Alternatives 1 and 2 are estimated to decrease biomass, but the stock remains well above $B_{40\%}$ throughout the projection period. The trajectory is similar for the spawning output and depletion. Under Alternative 2, the stock stays at a higher stock status over the time series due to the expected lower harvest in 2027 and 2028. Regardless, both Alternatives stay above the $B_{40\%}$ management target and the choice between Alternatives will not impact the overall stock status in the projection period. The PPA is a more precautionary approach to annual estimated depletion than Alternative 1 and is reflective of catch trends in the fishery at present. At the end of the projection period, the Alternative 1 ACL would be 50 mt lower than under Alternative 2, indicating Alternative 2 is the more precautionary approach to HCRs. Neither Alternative is likely to constrain fisheries or result in the stock becoming overfished. Because Alternative 2 results in ACLs that are more reflective of the current fishery than Alternative 1 and would allow more stable ACLs over the long term, there is no operational advantage expected from the increased ACLs that would occur under Alternative 1. Therefore, a precautionary approach does not limit the fishery for this stock and is consistent with National Standard 1.

For rougheye/blackspotted rockfish, the 2025 assessment (Cope et al, 2025) estimated the stock to be well above the $B_{40\%}$ management target, at 88 percent of unfished biomass. The Council adopted Alternative 2 as PPA. Under both Alternatives 1 and 2, the trajectory is similar for the spawning output and depletion and biomass declines but remains above $B_{40\%}$ over the 10-year projection period. Alternative 2, with the lower amount of harvest in 2027 and 2028 does result in higher spawning output and depletion as compared to Alternative 1 over the time series. However, the choice between Alternatives will not impact the overall stock status in the projection period, because both Alternatives maintain the stock well above $B_{40\%}$ throughout the projection period, thus the stock is not likely to become overfished regardless of the Alternative adopted. At the end of the projection period, the Alternative 2 ACL is estimated to be 16 mt higher than under Alternative 1. Alternative 2 is a more precautionary approach to the uncertainty surrounding biomass estimates from the assessment, and neither Alternative is likely to constrain catch within the fishery; thus, Alternative 2 is consistent with National Standard 1.

For yellowtail rockfish north of 40°10′ N. lat., the Council adopted Alternative 2 as their PPA. The assessment (Oken et al, 2025) estimated unfished biomass at 58 percent at the beginning of the projection period. For both Alternatives 1 and 2, the spawning output and depletion trajectories are similar. Stock status decreases until 2031, but begins to gradually increase after that year, with the stock remaining above $B_{40\%}$ throughout the projection period. Under Alternative 2, the stock is at a lower stock status for the majority of the time series due to the projected higher harvest in 2027 and 2028; however, overall stock status stays in a similar state as Alternative 1. Neither of the Alternatives are likely to result in overfishing and the projected difference in unfished biomass between the two Alternatives at year 10 is approximately nine metric tons. Therefore, the choice between Alternatives would not impact the overall stock status in the projection period. A key difference between the Alternatives is the Alternative 2 ABC/ACL is set one metric ton lower than the OFL for 2027. This minimal buffer could raise concerns that the OFL could be exceeded; however, overfishing is not expected as the Council closely monitors catch of managed species and can take inseason action at any one five annual meetings to achieve, but no exceed, ACLs. Thus, Alternative 2 is consistent with National Standard 1, as increased ACLs under Alternative 2 may slightly reduce constraints on the fishery relative to Alternative 1 and thus support the fishery in achieving OY.

For yelloweye rockfish, the 2025 update assessment (Johnston et al, 2025) indicates the stock is rebuilt as of 2026, at 40.1 percent of unfished biomass. The stock's unfished biomass is further projected to increase over the next 10 years. Alternative 2 was adopted by the Council as PPA. For both Alternatives 1 and 2, the biomass is projected to increase for spawning output and fraction unfished over the projection period, with similar trajectories. Both Alternatives maintain the stock well above $B_{40\%}$ throughout the projection period, thus the stock is not likely to become overfished regardless of the Alternative adopted and the choice between Alternatives does not impact stock status over the projection period. At the end of the projection period, the ACLs under the Alternatives differ by one mt, with Alternative 2 being the higher of the two. Under Alternative 2, the stock does end up at a higher stock status in 2027 and 2028 due to lower harvest limits. While the difference of the Alternatives in terms of impacts to biomass may be minimal, Alternative 2 is a more precautionary approach given the stock has recently rebuilt above the management target but is expected to allow additional opportunities for fisheries and is thereby consistent with National Standard 1.

For shortspine thornyhead the Council adopted Alternative 2 as their PPA. The ACLs under Alternative 2 are 50 mt and 46 mt higher in 2027 and 2028, respectively, than under Alternative 1. Under both Alternatives 1 and 2, the spawning output and depletion trajectories are similar over the 10-year projection period, even though Alternative 2 permits a higher amount of harvest in 2027 and 2028. Neither of the Alternatives are likely to result in overfishing and the projected difference in unfished biomass between the two Alternatives at year 10 is approximately one metric ton. By the end of the projection period, Alternative 1 results in a 0.1 percent higher estimated unfished biomass than under Alternative 2. In both cases, this stock reaches $B_{40\%}$ at the end of the projection period. The choice between Alternatives does not therefore impact the overall stock status in the projection period, even though there is a slightly larger buffer between the ABC/ACL and OFL under Alternative 1, which could theoretically decrease the risk of overfishing. Accordingly, Alternative 2 is consistent with National Standard 1 because the increased ACLs would reduce constraints on the fishery relative to Alternative 1, and thus support the fishery in achieving OY.

For petrale sole, the Council adopted Alternative 2 as their PPA. The ACLs under Alternative 2 are 40 mt and 66 mt higher in 2027 and 2028, respectively, than under Alternative 1. Under both Alternatives, the spawning output and depletion trajectory are similar and the stock remains above $B_{25\%}$ over the 10-year projection period. The stock biomass is projected to decrease initially and, after 2028, begins to increase under the Alternatives. However, Alternative 2, with the higher amount of harvest in 2027 and 2028, does remain below the Alternative 1 anticipated depletion until 2034. Neither of the Alternatives are likely to result in overfishing and the projected difference in unfished biomass between the two Alternatives at year 10 is approximately three metric tons. Because the choice between Alternatives will not impact the overall stock status in the projection period, and increased ACLs under Alternative 2 may slightly reduce constraints on the fishery relative to Alternative 1, and thus support the fishery in achieving OY, Alternative 2 is consistent with National Standard 1.

National Standard 2 — Conservation and management measures shall be based upon the best scientific information available.

The best scientific information available (BSIA) standard applies to the following areas relative to this proposed action: stock assessments, rebuilding analyses, and methods for determining management reference points (overfishing limit [OFL], acceptable biological catch [ABC], annual

catch limit [ACL], etc.). These areas form the basis for determining harvest levels and the evaluation of socioeconomic impacts. All decisions made as part of the 2027-28 process were consistent with the Regional BSIA Framework Policy and, developed in response to NMFS's Policy Directive 01-101-10. Harvest specifications for 2027 and 2028 were updated and based on default or alternative HCRs analyzed in this document. As evidenced by the analyses and comments provided by the Council's numerous advisory panels, including the Scientific and Statistical Committee (SSC), and the committee reports submitted in preparation for and at Council meetings, these values reflect the application of the BSIA to current harvest management policies.

The harvest specifications considered under the action (the Alternatives, including the Final Preferred Alternatives) are based on the most recent stock assessments, rebuilding analyses, and other scientific products, such as catch-only updates. All of these were developed through the peer review stock assessment review (STAR) or other similar process, and all of these assessments were determined to be BSIA by the SSC and the National Marine Fisheries Service (NMFS), before these results were used to decide harvest specifications and management measures for 2027-28.

The Groundfish SAFE document will be updated to summarize the basis for the alternative harvest specifications considered by the Council and will reference the stock assessments, rebuilding analyses, and other scientific information that was used to develop the 2027-28 harvest specifications and management measures. The Groundfish SAFE (PFMC, 20256c) document also describes the methods that were used to determine reference points for harvest specifications (OFL, ABC, ACL, etc.) for the Pacific Coast groundfish stocks and stock complexes.

The process to determine stock assessment priorities for Pacific Coast groundfish utilizes a matrix of factors designed by the NMFS's Northwest Fisheries Science Center (NWFSC), following national NMFS guidance on best practices for making such decisions. This process has been judged by NMFS to be BSIA.

5. Appendix 1

Table 13: Alternative 1, Draft 2027-28 overfishing limits (OFL), acceptable biological catches (ABC), and annual catch limits (ACL) under default harvest control rules in metric tons (mt).

Year	Stock	FMU	Category	Buffer	OFL (mt)	ABC (mt)	ACL (mt)	Description
2027	Arrowtooth Flounder	CW	2 (Year Based)	0.346	12,152	7,947	7,947	OFL based on the 2021 catch-only projection of the 2017 update assessment (Table 1; Correa et al. 2021; Agenda Item C.6 Attachment 9 Sept 2021).
2028	Arrowtooth Flounder	CW	2 (Year Based)	0.358	11,107	7,131	7,131	OFL based on the 2021 catch-only projection of the 2017 update assessment (Table 1; Correa et al. 2021; Agenda Item C.6 Attachment 9 Sept 2021).
2027	Big Skate	CW	2 (Year Based)	0.174	1,398	1,155	1,155	OFL projected using a 50% SPR harvest rate in the 2019 big skate assessment (Table 15 pg 67).
2028	Big Skate	CW	2 (Year Based)	0.182	1,372	1,122	1,122	OFL projected using a 50% SPR harvest rate in the 2019 big skate assessment (Table 15 pg 67).
2027	Black Rockfish	WA	1 (Year Based)	0.074	260	240	240	OFL projected using a 50% SPR harvest rate in the 2023 full assessment (Table vii, pg xix).
2028	Black Rockfish	WA	1 (Year Based)	0.078	261	241	241	OFL projected using a 50% SPR harvest rate in the 2023 full assessment (Table vii, pg xix).
2027	Black Rockfish	CA	1 (Year Based)	0.074	281	260	249	OFL projected using a 50% SPR harvest rate in the 2023 full assessment (northern and central area models combined) (Table 65, pg 142). Precautionary, ACL ; ABC.
2028	Black Rockfish	CA	1 (Year Based)	0.078	293	270	261	OFL projected using a 50% SPR harvest rate in the 2023 full assessment (northern and central area models combined) (Table 65, pg 142). Precautionary, ACL ; ABC.

Year	Species	Area	Basis					Notes
2027	Bocaccio	S of 40° 10'	1 (Year Based)	0.100	2,542	2,288	2,288	OFL from 2025 catch only projections based on the 2017 assessment; 7.4% reduction to subtract the portion of the assessed stock north of 40☐10☐ N. lat.(Table 1 pg 1; Agenda Item F.2 Attachment 2 Nov 2025). S of 40☐10☐ N. lat.2027 OFL 2745 - (2745*0.074) = 2541.87; 2028 OFL 2633 - (2633*0.074) = 2438.158; 2027 ABC 2471 - (2471*0.074) = 2288.15; 2028 ABC 2360 - (2360*0.074) = 2185.36.
2028	Bocaccio	S of 40° 10'	1 (Year Based)	0.104	2,438	2,185	2,185	OFL from 2025 catch only projections based on the 2017 assessment; 7.4% reduction to subtract the portion of the assessed stock north of 40☐10☐ N. lat.(Table 1 pg 1; Agenda Item F.2 Attachment 2 Nov 2025). S of 40☐10☐ N. lat.2027 OFL 2745 - (2745*0.074) = 2541.87; 2028 OFL 2633 - (2633*0.074) = 2438.158; 2027 ABC 2471 - (2471*0.074) = 2288.15; 2028 ABC 2360 - (2360*0.074) = 2185.36.
2027	Cabezon	CA	1 (Year Based)	0.091	165	150	150	OFL projected using a 45% SPR from the 2019 assessment (Table ES18 pg 41; Table ES19 pg 42).
2028	Cabezon	CA	1 (Year Based)	0.096	161	146	146	OFL projected using a 45% SPR from the 2019 assessment (Table ES18 pg 41; Table ES19 pg 42).
2027	Cabezon	34° 27' - 42°	1 (Year Based)	0.091	145	132		OFL projected using a 45% SPR from the 2019 assessment, Northern CA model(Table ES19 pg 42).
2028	Cabezon	34° 27' - 42°	1 (Year Based)	0.096	142	128		OFL projected using a 45% SPR from the 2019 assessment, Northern CA model(Table ES19 pg 42).
2027	Cabezon	S of 34° 27'	1 (Year Based)	0.091	20	18		OFL projected using a 45% SPR from the 2019 assessment, Southern CA model (Table ES18 pg 41).

Year	Species	Area	Stock		OFL	ABC	ACL	Notes
2028	Cabezon	S of 34° 27'	1 (Year Based)	0.096	20	18		OFL projected using a 45% SPR from the 2019 assessment, Southern CA model (Table ES18 pg 41).
2027	California Scorpionfish	CW	CA Scorpionfish (Year Based)	0.115	263	233	233	OFL from the 2019 catch-only update of the 2017 assessment (Table 6 pg 4; Agenda Item H.8 Supp Attachment 2 Sept 2019).
2028	California Scorpionfish	CW	CA Scorpionfish (Year Based)	0.071	261	229	229	OFL from the 2019 catch-only update of the 2017 assessment (Table 6 pg 4; Agenda Item H.8 Supp Attachment 2 Sept 2019).
2027	Canary Rockfish	CW	1 (Year Based)	0.074	694	643	606	OFL from the 2025 catch only projections based on the 2023 full assessment, and changes adopted for 2026,P*=0.45 and assumed full attainment of ACL (Table 3, Agenda Item G.3 Attachment 14 Sept 2025). Precautionary, ACL;ABC.
2028	Canary Rockfish	CW	1 (Year Based)	0.078	721	665	623	OFL from the 2025 catch only projections based on the 2023 full assessment, and changes adopted for 2026,P*=0.45 and assumed full attainment of ACL (Table 3, Agenda Item G.3 Attachment 14 Sept 2025). Precautionary, ACL;ABC.
2027	Chilipepper	S of 40° 10'	1 (Year Based)	0.065	3,194	2,986	2,986	OFL from the 2025 full assessment, P* = 0.45 (Table h; Agenda Item G.3 Attachment 3 Sept 2025). OFLs are apportioned to the North (7%) and South (93%) of 40□10□ N lat. based on average historical landings. S of 40°10' N lat. 2027 OFL = 3434.3 * 0.93 = 3193.89; 2028 OFL = 3318.1 * 0.93 = 3085.833. 2027 ABC = 3211.1 * 0.93 = 2986.323; 2028 ABC = 3085.8 * 0.93 = 2869.794.
2028	Chilipepper	S of 40° 10'	1 (Year Based)	0.070	3,086	2,870	2,870	OFL from the 2025 full assessment, P* = 0.45 (Table h; Agenda Item G.3 Attachment 3 Sept 2025). OFLs are apportioned to the North (7%) and South (93%) of 40□10□ N lat. based on average historical landings. S of 40°10' N lat. 2027 OFL = 3434.3 * 0.93 = 3193.89; 2028 OFL = 3318.1 * 0.93 =

Year	Species	Area						Comments
								3085.833. 2027 ABC = 3211.1 * 0.93 = 2986.323; 2028 ABC = 3085.8 * 0.93 = 2869.794.
2027	Cowcod	S of 40° 10'			111	74	74	Harvest specifications are the sum of assessed area projections (South of Pt Conception 34° 27' N. lat.) and DBSRA estimates (40° 10' to 34° 27' N. lat.).
2028	Cowcod	S of 40° 10'			111	73	73	Harvest specifications are the sum of assessed area projections (South of Pt Conception 34° 27' N. lat.) and DBSRA estimates (40° 10' to 34° 27' N. lat.).
2027	Cowcod	40° 10' - 34° 27'	3 (Year Based)	0.398	19	11		OFL is based on the 2019 DB-SRA estimate in Appendix B of the 2019 cowcod assessment (Table F2 pg 179; Percentile 50% (Median), 2022 OFL value = 19.2) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025).OFL apportioned to the north of 40° 10' N lat. (3%) and 40° 10' - 34° 27' N lat. (97%) based on cumulative historical catch (Table F3 pg 179; 1916-2018).
2028	Cowcod	40° 10' - 34° 27'	3 (Year Based)	0.398	19	11		OFL is based on the 2019 DB-SRA estimate in Appendix B of the 2019 cowcod assessment (Table F2 pg 179; Percentile 50% (Median), 2022 OFL value = 19.2) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025).OFL apportioned to the north of 40° 10' N lat. (3%) and 40° 10' - 34° 27' N lat. (97%) based on cumulative historical catch (Table F3 pg 179; 1916-2018).
2027	Cowcod	S of 34° 27'	2 (Year Based)	0.320	92	63		OFL is based on a 50% SPR harvest rate projected in the 2019 assessment, with a time varying category 2 sigma, P* = 0.4. in 2019 projections (Table 6 pg 5; error in caption as correction is South of 34° 27' N. lat.; Agenda Item H.6 Attachment 2 November 2019).

2028	Cowcod	S of 34° 27'	2 (Year Based)	0.333	92	61		OFL is based on a 50% SPR harvest rate projected in the 2019 assessment, with a time varying category 2 sigma, P* = 0.4. in 2019 projections (Table 6 pg 5; error in caption as correction is South of 34° 27' N. lat.; Agenda Item H.6 Attachment 2 November 2019).
2027	Darkblotched Rockfish	CW	1 (Year Based)	0.100	859	773	773	OFL from the 2025 catch-only projections based on the 2017 assessment (Table 1, Agenda Item G.3 Attachment 16 Sept 2025).
2028	Darkblotched Rockfish	CW	1 (Year Based)	0.104	842	754	754	OFL from the 2025 catch-only projections based on the 2017 assessment (Table 1, Agenda Item G.3 Attachment 16 Sept 2025).
2027	Dover Sole	CW	1 (Year Based)	0.083	42,064	38,573	38,573	OFL projected using a 30% SPR harvest rate in the 2021 full assessment, with assumed removals equal to the adopted ACL of 50,000 mt in 2023-2024 (per Sept 2023 Council request) (Table 2; Agenda Item E.2 Revised Attachment 4 Nov 2023).
2028	Dover Sole	CW	1 (Year Based)	0.087	39,010	35,616	35,616	OFL projected using a 30% SPR harvest rate in the 2021 full assessment, with assumed removals equal to the adopted ACL of 50,000 mt in 2023-2024 (per Sept 2023 Council request) (Table 2; Agenda Item E.2 Revised Attachment 4 Nov 2023).
2027	English Sole	CW	2 (Year Based)	0.220	4,072	3,168	3,168	OFL is the MSY proxy from the 2013 data-moderate assessment, with the default ABC calculated using a Category 3 sigma buffer (2.0) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025).
2028	English Sole	CW	2 (Year Based)	0.227	4,072	3,168	3,168	OFL is the MSY proxy from the 2013 data-moderate assessment, with the default ABC calculated using a Category 3 sigma buffer (2.0) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025).

2027	Lingcod	N of 40° 10'	2 (Year Based)	0.159	4,140	3,482	3,482	OFLs projected using a 45% SPR harvest rate in the 2021 full assessment of lingcod North of 40☐10☐ N lat. (Table vii pg xvi).
2028	Lingcod	N of 40° 10'	2 (Year Based)	0.167	4,128	3,439	3,439	OFLs projected using a 45% SPR harvest rate in the 2021 full assessment of lingcod North of 40☐10☐ N lat. (Table vii pg xvi).
2027	Lingcod	S of 40° 10'	2 (Year Based)	0.159	966	812	789	OFLs projected using a 45% SPR harvest rate in the 2021 full assessment of lingcod South of 40☐10☐ N lat. (Table vii pg xvi).The southern stock of lingcod is below 40%, and 40-10 rule applied. Precautionary, ACL;ABC.
2028	Lingcod	S of 40° 10'	2 (Year Based)	0.167	984	820	796	OFLs projected using a 45% SPR harvest rate in the 2021 full assessment of lingcod South of 40☐10☐ N lat. (Table vii pg xvi).The southern stock of lingcod is below 40%, and 40-10 rule applied. Precautionary, ACL;ABC.
2027	Longnose Skate	CW	2 (Year Based)	0.174	1,872	1,546	1,546	OFLs projected using a 45% SPR harvest rate in the 2019 assessment (Table ES-6 pg 20). ACL = ABC.
2028	Longnose Skate	CW	2 (Year Based)	0.182	1,852	1,515	1,515	OFLs projected using a 45% SPR harvest rate in the 2019 assessment (Table ES-6 pg 20). ACL = ABC.
2027	Longspine Thornyhead	CW	2 (Year Based)	0.394	4,076	2,471		Coastwide OFL projected using a 50% SPR harvest rate in 2019 catch-only projections of the 2013 assessment (Table g pg 13), but with sigma capped at 2.0 for buffer calculation with P* = 0.40, the buffer fraction multiplier = 0.602 (Agenda Item G.6.a. Supplemental SSC Report 1 September 2025). The coastwide ABC (P* = 0.4) is apportioned N (76%) and S (24%) of 34° 27' N lat. to determine ACLs based on the 2003-2012 average swept area biomass from the NMFS trawl survey.
2028	Longspine Thornyhead	CW	2 (Year Based)	0.405	4,008	2,413		Coastwide OFL projected using a 50% SPR harvest rate in 2019 catch-only projections of the 2013 assessment (Table g pg 13), but with

								sigma capped at 2.0 for buffer calculation with P* = 0.40, the buffer fraction multiplier = 0.602 (Agenda Item G.6.a. Supplemental SSC Report 1 September 2025). The coastwide ABC (P* = 0.4) is apportioned N (76%) and S (24%) of 34° 27' N lat. to determine ACLs based on the 2003-2012 average swept area biomass from the NMFS trawl survey.
2027	Longspine Thornyhead	S of 34° 27'	2 (Year Based)	0.394			593	Coastwide OFL projected using a 50% SPR harvest rate in 2019 catch-only projections of the 2013 assessment (Table g pg 13), but with sigma capped at 2.0 for buffer calculation with P* = 0.40, the buffer fraction multiplier = 0.602 (Agenda Item G.6.a. Supplemental SSC Report 1 September 2025). The coastwide ABC (P* = 0.4) is apportioned N (76%) and S (24%) of 34□27□ N lat. to determine ACLs based on the 2003-2012 average swept area biomass from the NMFS trawl survey. S of 34° 27' N lat. 2027 ACL = ABC 2,471.39 * 0.24 = 593.13; 2028 ACL = ABC 2,412.82 * 0.24 = 579.08.
2028	Longspine Thornyhead	S of 34° 27'	2 (Year Based)	0.405			579	Coastwide OFL projected using a 50% SPR harvest rate in 2019 catch-only projections of the 2013 assessment (Table g pg 13), but with sigma capped at 2.0 for buffer calculation with P* = 0.40, the buffer fraction multiplier = 0.602 (Agenda Item G.6.a. Supplemental SSC Report 1 September 2025). The coastwide ABC (P* = 0.4) is apportioned N (76%) and S (24%) of 34□27□ N lat. to determine ACLs based on the 2003-2012 average swept area biomass from the NMFS trawl survey. S of 34° 27' N lat. 2027 ACL = ABC 2,471.39 * 0.24 = 593.13; 2028 ACL = ABC 2,412.82 * 0.24 = 579.08.
2027	Longspine Thornyhead	N of 34° 27'	2 (Year Based)	0.394			1,878	Coastwide OFL projected using a 50% SPR harvest rate in 2019 catch-only projections of the 2013 assessment (Table g pg 13), but with sigma capped at 2.0 for buffer calculation

Year	Species	Area	Fixed/Year Based	SPR	OFL	ABC	ACL	Notes
								with P* = 0.40, the buffer fraction multiplier = 0.602 (Agenda Item G.6.a. Supplemental SSC Report 1 September 2025). The coastwide ABC (P* = 0.4) is apportioned N (76%) and S (24%) of 34° 27' N lat. to determine ACLs based on the 2003-2012 average swept area biomass from the NMFS trawl survey. N of 34° 27' N lat. 2027 ACL = ABC 2,471.39 * 0.76 = 1878.26; 2028 ACL = ABC 2412.82 * 0.76 = 1833.74.
2028	Longspine Thornyhead	N of 34° 27'	2 (Year Based)	0.405			1,834	Coastwide OFL projected using a 50% SPR harvest rate in 2019 catch-only projections of the 2013 assessment (Table g pg 13), but with sigma capped at 2.0 for buffer calculation with P* = 0.40, the buffer fraction multiplier = 0.602 (Agenda Item G.6.a. Supplemental SSC Report 1 September 2025). The coastwide ABC (P* = 0.4) is apportioned N (76%) and S (24%) of 34° 27' N lat. to determine ACLs based on the 2003-2012 average swept area biomass from the NMFS trawl survey. N of 34° 27' N lat. 2027 ACL = ABC 2,471.39 * 0.76 = 1878.26; 2028 ACL = ABC 2412.82 * 0.76 = 1833.74.
2027	Pacific Cod	CW	3 (Year Based)	0.398	3,200	1,926	1,600	OFL is based on the highest historical catch (in 1985). ACL = 50% of the OFL.
2028	Pacific Cod	CW	3 (Year Based)	0.398	3,200	1,926	1,600	OFL is based on the highest historical catch (in 1985). ACL = 50% of the OFL.
2027	Pacific Ocean Perch	N of 40° 10'	2 (Year Based)	0.190	3,856	3,123	3,123	OFL projected using a 50% SPR harvest rate in the 2019 Pacific Ocean Perch Updated Harvest Specification Projections of the 2017 assessment (Table 13, Agenda Item H.8 Supplemental Attachment 2 September 2019). ACL = ABC (P* = 0.45).
2028	Pacific Ocean Perch	N of 40° 10'	2 (Year Based)	0.197	3,781	3,036	3,036	OFL projected using a 50% SPR harvest rate in the 2019 Pacific Ocean Perch Updated Harvest Specification Projections of the 2017 assessment (Table 13, Agenda Item H.8

Year	Species	Area	Category		OFL	ABC	ACL	Notes
								Supplemental Attachment 2 September 2019). ACL = ABC (P* = 0.45).
2027	Pacific Spiny Dogfish	CW	2 (Year Based)	0.294	1,810	1,278	1,278	OFL is based on a 50% SPR harvest rate projected in the 2021 assessment, with a category 2 sigma, P* = 0.4, ACL=ABC (Table 4 pg 5; Agenda Item E.3 Supp Revised Attachment 4 November 2021).
2028	Pacific Spiny Dogfish	CW	2 (Year Based)	0.307	1,790	1,240	1,240	OFL is based on a 50% SPR harvest rate projected in the 2021 assessment, with a category 2 sigma, P* = 0.4, ACL=ABC (Table 4 pg 5; Agenda Item E.3 Supp Revised Attachment 4 November 2021).
2027	Pacific Whiting[a]	CW						
2028	Pacific Whiting[a]	CW						
2027	Petrale Sole	CW	1 (Year Based)	0.074	2,645	2,449	2,449	OFL from the 2025 catch-only projections based on the 2023 full assessment, and changes adopted for 2026, P*=0.45 and assumed full attainment of ACL (Table 2, Agenda Item G.3 Attachment 13 Sept 2025).
2028	Petrale Sole	CW	1 (Year Based)	0.078	2,628	2,423	2,423	OFL from the 2025 catch-only projections based on the 2023 full assessment, and changes adopted for 2026, P*=0.45 and assumed full attainment of ACL (Table 2, Agenda Item G.3 Attachment 13 Sept 2025).
2027	Quillback	CA			13	12	12	Harvest specifications for 2027-2028 based on 2025 full assessment, default HCR P*=0.45 based on Category 1b with sigma = 0.75 (Table 2, Agenda Item G.6 Attachment 2 September 2025). Stock defined as CA (S of 42).
2028	Quillback	CA			13	12	12	Harvest specifications for 2027-2028 based on 2025 full assessment, default HCR P*=0.45 based on Category 1b with sigma = 0.75 (Table 2, Agenda Item G.6 Attachment 2 September 2025). Stock defined as CA (S of 42).

2027	Sablefish	CW	1 (Year Based)	0.065	14,935	13,964		OFL based on the 2025 full assessment, P* = 0.45 (Table ix, pg xvi, Agenda Item G.3 Attachment 5 Sept 2025). ACL split N (78.5%) and S (21.5%) of 36 degrees N. latitude using a 5-year rolling avg (2019-2024, no survey 2020) of biomass estimates by area from the NWFSC WCGBT survey.
2028	Sablefish	CW	1 (Year Based)	0.070	16,240	15,103		OFL based on the 2025 full assessment, P* = 0.45 (Table ix, pg xvi, Agenda Item G.3 Attachment 5 Sept 2025). ACL split N (78.5%) and S (21.5%) of 36 degrees N. latitude using a 5-year rolling avg (2019-2024, no survey 2020) of biomass estimates by area from the NWFSC WCGBT survey.
2027	Sablefish	N of 36°	1 (Year Based)	0.065			10,962	OFL based on the 2025 full assessment, P* = 0.45 (Table ix, pg xvi, Agenda Item G.3 Attachment 5 Sept 2025). ACL split N (78.5%) and S (21.5%) of 36 degrees N. latitude using a 5-year rolling avg (2019-2024, no survey 2020) of biomass estimates by area from the NWFSC WCGBT survey. N of 36° N lat. 2027 ACL = ABC 13964 * 0.785 = 10961.74; 2028 ACL = ABC 15103 * 0.785 = 11855.855.
2028	Sablefish	N of 36°	1 (Year Based)	0.070			11,856	OFL based on the 2025 full assessment, P* = 0.45 (Table ix, pg xvi, Agenda Item G.3 Attachment 5 Sept 2025). ACL split N (78.5%) and S (21.5%) of 36 degrees N. latitude using a 5-year rolling avg (2019-2024, no survey 2020) of biomass estimates by area from the NWFSC WCGBT survey. N of 36° N lat. 2027 ACL = ABC 13964 * 0.785 = 10961.74; 2028 ACL = ABC 15103 * 0.785 = 11855.855.
2027	Sablefish	S of 36°	1 (Year Based)	0.065			3,002	OFL based on the 2025 full assessment, P* = 0.45 (Table ix, pg xvi, Agenda Item G.3 Attachment 5 Sept 2025). ACL split N (78.5%) and S (21.5%) of 36 degrees N. latitude using a 5-year rolling avg (2019-2024, no survey 2020) of biomass estimates

Year	Species	Area	Category					Basis
								by area from the NWFSC WCGBT survey. S of 36☐ N lat. 2027 ACL = ABC 13964 * 0.215 = 3002.26; 2028 ACL = ABC 15103 * 0.215 = 3247.145.
2028	Sablefish	S of 36°	1 (Year Based)	0.070			3,247	OFL based on the 2025 full assessment, P* = 0.45 (Table ix, pg xvi, Agenda Item G.3 Attachment 5 Sept 2025). ACL split N (78.5%) and S (21.5%) of 36 degrees N. latitude using a 5-year rolling avg (2019-2024, no survey 2020) of biomass estimates by area from the NWFSC WCGBT survey. S of 36° N lat. 2027 ACL = ABC 13964 * 0.215 = 3002.26; 2028 ACL = ABC 15103 * 0.215 = 3247.145.
2027	Shortspine Thornyhead	CW	2 (Year Based)	0.143	994	852	847	OFL from the 2025 catch-only projections based on the 2023 data-moderate assessment, and 2026 changes adopted (Table 3, Agenda Item G.3 Attachment 15 Sept 2025).Precautionary ACL ; ABC, 40-10 rule, P*=0.45 with assumed full attainment of ACL.
2028	Shortspine Thornyhead	CW	2 (Year Based)	0.151	1,014	861	856	OFL from the 2025 catch-only projections based on the 2023 data-moderate assessment, and 2026 changes adopted (Table 3, Agenda Item G.3 Attachment 15 Sept 2025).Precautionary ACL ; ABC, 40-10 rule, P*=0.45 with assumed full attainment of ACL.
2027	Splitnose	S of 40° 10'	1 (Year Based)	0.044	796	620	620	OFL is the SPR proxy MSY based on the 2009 assessment, with an ABC calculated using a default Category 3 sigma buffer (2.0) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025). Status quo apportionment is 36% N of 40° 10' and 64% S of 40° 10'. S of 40° 10' OFL 1244 * 0.64 = 796.16; ABC 968 * 0.64 = 619.52.
2028	Splitnose	S of 40° 10'	1 (Year Based)	0.044	796	620	620	OFL is the SPR proxy MSY based on the 2009 assessment, with an ABC calculated using a default Category 3 sigma buffer (2.0)

								(Agenda Item G.6.a Supplemental SSC Report 1 September 2025). Status quo apportionment is 36% N of 40° 10' and 64% S of 40° 10'. S of 40° 10' OFL 1244 * 0.64 = 796.16; ABC 968 * 0.64 = 619.52.
2027	Starry Flounder	CW	3 (Year Based)	0.398	652	393	393	OFL based on the 2017 DB-SRA assessment of starry flounder; estimated median MSY values combined coastwide (Table 5, Agenda Item F.6 Attachment 3 November 2017, and Agenda Item F.6.a Supp SSC Rpt1 November 2017).
2028	Starry Flounder	CW	3 (Year Based)	0.398	652	393	393	OFL based on the 2017 DB-SRA assessment of starry flounder; estimated median MSY values combined coastwide (Table 5, Agenda Item F.6 Attachment 3 November 2017, and Agenda Item F.6.a Supp SSC Rpt1 November 2017).
2027	Widow Rockfish	CW	1 (Year Based)	0.061	4,916	4,596	4,596	OFL based on the 2026 assessment (Table vii pg xv of Agenda Item D.2, Attachment 1, March 2026)
2028	Widow Rockfish	CW	1 (Year Based)	0.065	5,172	4,810	4,810	OFL based on the 2026 assessment (Table vii pg xv of Agenda Item D.2, Attachment 1, March 2026)
2027	Yelloweye Rockfish	CW	1 (Year Based)	0.127	129	113	113	OFL based on the 2025 update of the 2017 assessment (Table vii pg xvi, Agenda Item G.3 Attachment 6 Sept 2025).
2028	Yelloweye Rockfish	CW	1 (Year Based)	0.136	131	113	113	OFL based on the 2025 update of the 2017 assessment (Table vii pg xvi, Agenda Item G.3 Attachment 6 Sept 2025).
2027	Yellowtail Rockfish	N of 40° 10'	1 (Year Based)	0.065	5,051	4,723	4,723	OFL is based on the 2025 full assessment (Table vii pg xvi; Agenda Item G.3 Attachment 1 Sept 2025).
2028	Yellowtail Rockfish	N of 40° 10'	1 (Year Based)	0.070	4,882	4,540	4,540	OFL is based on the 2025 full assessment (Table vii pg xvi; Agenda Item G.3 Attachment 1 Sept 2025).

2027	Blue/Deacon/Black Rockfish	OR		0.044	495	448	448	Sum of harvest specification contributions of component stocks in the complex.
2028	Blue/Deacon/Black Rockfish	OR		0.044	502	452	452	Sum of harvest specification contributions of component stocks in the complex.
2027	Black Rockfish	OR	1 (Year Based)	0.074	402	372	372	OFL from the 2025 catch only projections based on the 2023 full assessment (Table 1, Agenda Item F.2 Attachment 1 November 2025).
2028	Black Rockfish	OR	1 (Year Based)	0.078	410	378	378	OFL from the 2025 catch only projections based on the 2023 full assessment (Table 1, Agenda Item F.2 Attachment 1 November 2025).
2027	Blue	OR	2 (Year Based)	0.190	93	76	76	OFL projected using a 50% SPR from the 2021 catch-only projections for blue and deacon rockfishes based on 2017 assessment (Table 3; Agenda Item C.8 Attachment 2 September 2021). HG = ABC/ACL for managing OR fisheries.
2028	Blue	OR	2 (Year Based)	0.197	92	74	74	OFL projected using a 50% SPR from the 2021 catch-only projections for blue and deacon rockfishes based on 2017 assessment (Table 3; Agenda Item C.8 Attachment 2 September 2021). HG = ABC/ACL for managing OR fisheries.
2027	Cabezon/Kelp Greenling	WA			19	14	14	Sum of harvest specification contributions of component stocks in the complex.
2028	Cabezon/Kelp Greenling	WA			19	14	14	Sum of harvest specification contributions of component stocks in the complex.
2027	Cabezon	WA	3 (Year Based)	0.222	12	9	9	OFL based a 2023 catch-only update of the 2019 DB-SRA assessment (Table 2, Agenda Item F.2 Supp Revised Attachment 2 April 2024).
2028	Cabezon	WA	3 (Year Based)	0.222	11	9	9	OFL based a 2023 catch-only update of the 2019 DB-SRA assessment (Table 2, Agenda

Year	Stock	Area	Method		OFL	ABC	ACL	Basis
								Item F.2 Supp Revised Attachment 2 April 2024).
2027	Kelp Greenling	WA	3 (Year Based)	0.222	7	6	6	OFL based on a 2015 DB-SRA estimate using a low vulnerability prior (Table 11 pg 12, Delta option 4; Agenda Item I.4 Attachment 4 November 2015).Low vulnerability prior from data-moderate assessment document (Figure 54 in Cope, J., E. Dick, A. MacCall, M. Monk, B. Soper, and C. Wetzel. 2015. Data-moderate stock assessments for brown, China, copper, sharpchin, stripetail, and yellowtail rockfishes and English and rex soles in 2013. Pacific Fishery Management Council, Portland, OR, 298 p.).
2028	Kelp Greenling	WA	3 (Year Based)	0.222	7	6	6	OFL based on a 2015 DB-SRA estimate using a low vulnerability prior (Table 11 pg 12, Delta option 4; Agenda Item I.4 Attachment 4 November 2015).Low vulnerability prior from data-moderate assessment document (Figure 54 in Cope, J., E. Dick, A. MacCall, M. Monk, B. Soper, and C. Wetzel. 2015. Data-moderate stock assessments for brown, China, copper, sharpchin, stripetail, and yellowtail rockfishes and English and rex soles in 2013. Pacific Fishery Management Council, Portland, OR, 298 p.).
2027	Cabezon/Kelp Greenling	OR			193	174	174	Sum of harvest specification contributions of component stocks in the complex.
2028	Cabezon/Kelp Greenling	OR			193	173	173	Sum of harvest specification contributions of component stocks in the complex.
2027	Cabezon	OR	1 (Year Based)	0.091	52	47	47	OFL projected using a 45% SPR from the 2019 assessment, Oregon model (Table ES20 pg 43).
2028	Cabezon	OR	1 (Year Based)	0.096	51	46	46	OFL projected using a 45% SPR from the 2019 assessment, Oregon model (Table ES20 pg 43).

2027	Kelp Greenling	OR	1 (Year Based)	0.108	142	127	127	Default harvest specifications per SSC recommendation in November 2025 to use the 2026 OFL and ABC values for both 2027 and 2028 (Agenda Item F.3.a Supplemental SSC Report 1 November 2025). 2026 values are cited in the 2021 catch-only projections of the 2015 assessment (Table 5, Agenda Item C.8. Attachment 2 September 2021).
2028	Kelp Greenling	OR	1 (Year Based)	0.113	142	127	127	Default harvest specifications per SSC recommendation in November 2025 to use the 2026 OFL and ABC values for both 2027 and 2028 (Agenda Item F.3.a Supplemental SSC Report 1 November 2025). 2026 values are cited in the 2021 catch-only projections of the 2015 assessment (Table 5, Agenda Item C.8. Attachment 2 September 2021).
2027	Nearshore Rockfish North	N of 40° 10'			104	85	85	Sum of harvest specification contributions of component stocks in the complex.
2028	Nearshore Rockfish North	N of 40° 10'			103	83	83	Sum of harvest specification contributions of component stocks in the complex.
2027	Black and Yellow	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Black and Yellow	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Blue	42 - 40° 10'	2 (Year Based)	0.190	33	27	27	OFL from 2019 catch-only projections (Table g pg 16; Agenda Item H.5 Supp Revised Attachment 17 September 2019). 10% of the CA OFL is apportioned North of 40□10□ N lat. (see Appendix D of the 2017 Assessment, pg 361). N of 40□10□ N lat. 2027 OFL = 334.66 * 0.10 = 33.466; 2028 OFL = 334.42 * 0.10 = 33.442.
2028	Blue	42 - 40° 10'	2 (Year Based)	0.197	33	27	27	OFL from 2019 catch-only projections (Table g pg 16; Agenda Item H.5 Supp Revised Attachment 17 September 2019). 10% of the CA OFL is apportioned North of 40□10□ N lat. (see Appendix D of the 2017 Assessment, pg 361). N of 40□10□ N lat. 2027 OFL =

Year	Stock	Area	Category					Notes
								334.66 * 0.10 = 33.466; 2028 OFL = 334.42 * 0.10 = 33.442.
2027	Blue	WA	3 (Year Based)	0.222	7	5	5	Inferred Washington OFL provided in Appendix F (Table F2 pg 373) of the 2017 Blue and Deacon Rockfishes assessment. ABC=ACL
2028	Blue	WA	3 (Year Based)	0.222	7	5	5	Inferred Washington OFL provided in Appendix F (Table F2 pg 373) of the 2017 Blue and Deacon Rockfishes assessment. ABC=ACL
2027	Brown	N of 40° 10'	2 (Year Based)	0.220	2	2	2	OFL from the 2019 catch-only projections of the 2013 data-moderate assessment (Table g pg 13), but with sigma capped at 2.0 for buffer calculation with P* = 0.45, the buffer fraction multiplier = 0.778 (Agenda Item G.6.a. Supplemental SSC Report 1 September 2025). The coastwide ABC is apportioned N (~1.2%) and S (~98.8%) of 40° 10' N lat. to determine ACLs based on the proportion of cumulative removals by area during 1916-2012.
2028	Brown	N of 40° 10'	2 (Year Based)	0.227	2	2	2	OFL from the 2019 catch-only projections of the 2013 data-moderate assessment (Table g pg 13), but with sigma capped at 2.0 for buffer calculation with P* = 0.45, the buffer fraction multiplier = 0.778 (Agenda Item G.6.a. Supplemental SSC Report 1 September 2025). The coastwide ABC is apportioned N (~1.2%) and S (~98.8%) of 40° 10' N lat. to determine ACLs based on the proportion of cumulative removals by area during 1916-2012.
2027	Calico	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Calico	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	China	40° 10' - 4616	2 (Year Based)	0.205	19	15	15	OFLs projected from the Central Model in the 2015 assessment updated with 2019 catch-only projections (Table r pg 34; Agenda

								Item H.5 Supp Revised Attachment 19 September 2019).
2028	China	40° 10' - 4616	2 (Year Based)	0.212	19	15	15	OFLs projected from the Central Model in the 2015 assessment updated with 2019 catch-only projections (Table r pg 34; Agenda Item H.5 Supp Revised Attachment 19 September 2019).
2027	China	WA	2 (Year Based)	0.205	9	7	7	OFLs projected from the North Model in the 2015 assessment updated with 2019 catch-only projections (Table r pg 34; Agenda Item H.5 Supp Revised Attachment 19 September 2019).
2028	China	WA	2 (Year Based)	0.212	9	7	7	OFLs projected from the North Model in the 2015 assessment updated with 2019 catch-only projections (Table r pg 34; Agenda Item H.5 Supp Revised Attachment 19 September 2019).
2027	Copper	WA - OR	2 (Year Based)	0.159	18	15	15	OFL from 2023 catch-only projections of the 2021 assessments, based on a stock definition of N of 42 (WA+OR)) (Table 5 pg 4; Agenda Item G.6 Supp Revised Attachment 2 Sept 2023).
2028	Copper	WA - OR	2 (Year Based)	0.167	18	15	15	OFL from 2023 catch-only projections of the 2021 assessments, based on a stock definition of N of 42 (WA+OR)) (Table 5 pg 4; Agenda Item G.6 Supp Revised Attachment 2 Sept 2023).
2027	Copper	WA	2 (Year Based)	0.159				OFL from the 2023 projection update of the 2021 assessments, based on a stock definition of N of 42 (WA+OR)) (Table 5 pg 4; Agenda Item G.6 Supp Revised Attachment 2 Sept 2023).Note: Values placed in GF FMP Amend 31 stock definition record for Area = Washington and Oregon. These records remain to track the separate assessments combined to single stock definition.

2028	Copper	WA	2 (Year Based)	0.167				OFL from the 2023 projection update of the 2021 assessments, based on a stock definition of N of 42 (WA+OR)) (Table 5 pg 4; Agenda Item G.6 Supp Revised Attachment 2 Sept 2023).Note: Values placed in GF FMP Amend 31 stock definition record for Area = Washington and Oregon. These records remain to track the separate assessments combined to single stock definition.
2027	Copper	42 - 40° 10'	1 (Year Based)	0.074	7	7	7	OFL projected from the 2023 full assessment; stock defined as CA (S of 42), apportioned to complex (N 40° 10' = 5.86%) based on estimates of rocky habitat and density of copper rockfish in the area (Table xiv pg xxviii and (North) Table xv pg xxix, March 2024 version). Precautionary, ACL;ABC.
2028	Copper	42 - 40° 10'	1 (Year Based)	0.078	7	7	7	OFL projected from the 2023 full assessment; stock defined as CA (S of 42), apportioned to complex (N 40° 10' = 5.86%) based on estimates of rocky habitat and density of copper rockfish in the area (Table xiv pg xxviii and (North) Table xv pg xxix, March 2024 version). Precautionary, ACL;ABC.
2027	Copper	OR	2 (Year Based)	0.159				OFL from the 2023 projection update of the 2021 assessments, based on a stock definition of N of 42 (WA+OR)) (Table 5 pg 4; Agenda Item G.6 Supp Revised Attachment 2 Sept 2023).Note: Values placed in GF FMP Amend 31 stock definition record for Area = Washington and Oregon. These records remain to track the separate assessments combined to single stock definition.
2028	Copper	OR	2 (Year Based)	0.167				OFL from the 2023 projection update of the 2021 assessments, based on a stock definition of N of 42 (WA+OR)) (Table 5 pg 4; Agenda Item G.6 Supp Revised Attachment 2 Sept 2023).Note: Values placed in GF FMP Amend 31 stock definition record for Area = Washington and Oregon. These records

								remain to track the separate assessments combined to single stock definition.
2027	Gopher	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Gopher	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Grass	N of 40° 10'	3 (Year Based)	0.222	1	1	1	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Grass	N of 40° 10'	3 (Year Based)	0.222	1	1	1	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Kelp	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Kelp	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.

2027	Olive	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Olive	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Quillback	WA	3 (Year Based)	0.222	3	2	2	OFL projected using a 50% SPR harvest rate MSY proxy from the 2021 assessment of quillback rockfish in WA (November 2021 version Section 4.2 pg 20, per SSC recommendation as constant OFL = 2.86 mt, Category 3, P*=0.45, ABC = 2.22 mt).
2028	Quillback	WA	3 (Year Based)	0.222	3	2	2	OFL projected using a 50% SPR harvest rate MSY proxy from the 2021 assessment of quillback rockfish in WA (November 2021 version Section 4.2 pg 20, per SSC recommendation as constant OFL = 2.86 mt, Category 3, P*=0.45, ABC = 2.22 mt).
2027	Quillback	OR	2 (Year Based)	0.159	3	3	3	OFL projected using a 50% SPR harvest rate from the 2021 assessment of quillback rockfish in Oregon (December 2021 version, Table 14 pg 51, per Section 4.1 pg 23).
2028	Quillback	OR	2 (Year Based)	0.167	3	3	3	OFL projected using a 50% SPR harvest rate from the 2021 assessment of quillback rockfish in Oregon (December 2021 version, Table 14 pg 51, per Section 4.1 pg 23).

Year	Stock	Area	Category					Notes
2027	Treefish	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Treefish	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Nearshore Rockfish South	S of 40° 10'			1,145	929	928	Sum of harvest specification contributions of component stocks in the complex.
2028	Nearshore Rockfish South	S of 40° 10'			1,145	925	924	Sum of harvest specification contributions of component stocks in the complex.
2027	Black and Yellow	S of 40° 10'	2 (Year Based)	0.174				Gopher and black-and-yellow rockfishes are now combined in the 2019 assessment and resulting harvest specifications (documented in the gopher specifications). OFL based on a 50% SPR harvest rate projected in the 2019 assessment (Table g pg xix).
2028	Black and Yellow	S of 40° 10'	2 (Year Based)	0.182				Gopher and black-and-yellow rockfishes are now combined in the 2019 assessment and resulting harvest specifications (documented in the gopher specifications). OFL based on a 50% SPR harvest rate projected in the 2019 assessment (Table g pg xix).
2027	Blue	40° 10' - 34° 27'	2 (Year Based)	0.190	301	244	244	OFL from 2019 catch-only projections (Table g pg 16; Agenda Item H.5 Supp Revised Attachment 17 September 2019). 90% of the CA OFL is apportioned South of 40□10□ N lat. (see Appendix D of the 2017 Assessment, pg 361). S of 40□10□ N lat. 2027 OFL =

								334.66 * 0.90 = 301.194; 2028 OFL = 334.42 * 0.90 = 300.978.
2028	Blue	40° 10' - 34° 27'	2 (Year Based)	0.197	301	242	242	OFL from 2019 catch-only projections (Table g pg 16; Agenda Item H.5 Supp Revised Attachment 17 September 2019). 90% of the CA OFL is apportioned South of 40□10□ N lat. (see Appendix D of the 2017 Assessment, pg 361). S of 40□10□ N lat. 2027 OFL = 334.66 * 0.90 = 301.194; 2028 OFL = 334.42 * 0.90 = 300.978.
2027	Blue	S of 34° 27'	3 (Year Based)	0.222	22	17	17	Appendix G of the 2017 blue and deacon assessment describes calculation of the OFL proxy (pg 376).
2028	Blue	S of 34° 27'	3 (Year Based)	0.222	22	17	17	Appendix G of the 2017 blue and deacon assessment describes calculation of the OFL proxy (pg 376).
2027	Brown	S of 40° 10'	2 (Year Based)	0.220	181	141	141	OFL from the 2019 catch-only projections of the 2013 data-moderate assessment (Table g pg 13), but with sigma capped at 2.0 for buffer calculation with P* = 0.45, the buffer fraction multiplier = 0.778 (Agenda Item G.6.a. Supplemental SSC Report 1 September 2025). The coastwide ABC is apportioned N (~1.2%) and S (~98.8%) of 40° 10' N lat. to determine ACLs based on the proportion of cumulative removals by area during 1916-2012.
2028	Brown	S of 40° 10'	2 (Year Based)	0.227	181	141	141	OFL from the 2019 catch-only projections of the 2013 data-moderate assessment (Table g pg 13), but with sigma capped at 2.0 for buffer calculation with P* = 0.45, the buffer fraction multiplier = 0.778 (Agenda Item G.6.a. Supplemental SSC Report 1 September 2025). The coastwide ABC is apportioned N (~1.2%) and S (~98.8%) of 40° 10' N lat. to determine ACLs based on the proportion of cumulative removals by area during 1916-2012.

Year	Stock	Area	Category	Value				Notes
2027	Calico	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Calico	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	China	S of 40° 10'	2 (Year Based)	0.205	18	14	14	OFLs projected from the South Model in the 2015 assessment updated with 2019 catch-only projections (Table r pg 34; Agenda Item H.5 Supp Revised Attachment 19 September 2019).
2028	China	S of 40° 10'	2 (Year Based)	0.212	18	14	14	OFLs projected from the South Model in the 2015 assessment updated with 2019 catch-only projections (Table r pg 34; Agenda Item H.5 Supp Revised Attachment 19 September 2019).
2027	Copper	S of 40° 10'	1 (Year Based)	0.074	140	130	128	OFL projected from the 2023 full assessment; stock defined as CA (S of 42), apportioned to complex (N 40° 10' = 5.86%) based on estimates of rocky habitat and density of copper rockfish in the area (Table xiv pg xxviii and Table xv pg xxix, March 2024 version N Pt Conception and Nov 2023 version S Pt Conception). Precautionary, ACL;ABC. Values placed in GF FMP Amend 31 stock definition record for Area S of 40° 10'. ACL values split by designated areas (S 34° 27' - 2027 = 20.1, 2028 = 22) (40° 10' to 34° 27' - 2027 = 107.7, 2028 = 107.1).
2028	Copper	S of 40° 10'	1 (Year Based)	0.078	142	131	129	OFL projected from the 2023 full assessment; stock defined as CA (S of 42), apportioned to complex (N 40° 10' = 5.86%) based on estimates of rocky habitat and density of copper rockfish in the area (Table xiv pg xxviii and Table xv pg xxix, March 2024 version N Pt Conception and Nov 2023 version S Pt Conception). Precautionary, ACL;ABC. Values placed in GF FMP Amend 31 stock definition record for Area S of 40° 10'. ACL values split by designated areas (S 34° 27' - 2027 = 20.1, 2028 = 22) (40° 10' to 34° 27' - 2027 = 107.7, 2028 = 107.1).

2027	Copper	S of 34° 27'	1 (Year Based)	0.074				OFL projected from the 2023 full assessment; stock defined as CA (S of 42), apportioned to complex (N 40° 10' = 5.86%) based on estimates of rocky habitat and density of copper rockfish in the area (Table xiv pg xxviii and Table xv pg xxix, March 2024 version N Pt Conception and Nov 2023 version S Pt Conception). ACL values split by designated areas (S 34° 27' - 2027 = 20.1, 2028 = 22) (40° 10' to 34° 27' - 2027 = 107.7, 2028 = 107.1). Note: Values placed in GF FMP Amend 31 stock definition record for Area S of 40° 10'. Any sub-area records remain to track the separate assessments combined to single stock definition.
2028	Copper	S of 34° 27'	1 (Year Based)	0.078				OFL projected from the 2023 full assessment; stock defined as CA (S of 42), apportioned to complex (N 40° 10' = 5.86%) based on estimates of rocky habitat and density of copper rockfish in the area (Table xiv pg xxviii and Table xv pg xxix, March 2024 version N Pt Conception and Nov 2023 version S Pt Conception). ACL values split by designated areas (S 34° 27' - 2027 = 20.1, 2028 = 22) (40° 10' to 34° 27' - 2027 = 107.7, 2028 = 107.1). Note: Values placed in GF FMP Amend 31 stock definition record for Area S of 40° 10'. Any sub-area records remain to track the separate assessments combined to single stock definition.
2027	Copper	40° 10' - 34° 27'	1 (Year Based)	0.074				OFL projected from the 2023 full assessment; stock defined as CA (S of 42), apportioned to complex (N 40° 10' = 5.86%) based on estimates of rocky habitat and density of copper rockfish in the area (Table xiv pg xxviii and Table xv pg xxix, March 2024 version N Pt Conception and Nov 2023 version S Pt Conception). ACL values split by designated areas (S 34° 27' - 2027 = 20.1, 2028 = 22) (40° 10' to 34° 27' - 2027 = 107.7, 2028 = 107.1). Note: Values placed in GF FMP Amend 31 stock definition record

Year	Species	Area		Rate	OFL	ABC	ACL	Notes
								for Area S of 40° 10'. Any sub-area records remain to track the separate assessments combined to single stock definition.
2028	Copper	40° 10' - 34° 27'	1 (Year Based)	0.078				OFL projected from the 2023 full assessment; stock defined as CA (S of 42), apportioned to complex (N 40° 10' = 5.86%) based on estimates of rocky habitat and density of copper rockfish in the area (Table xiv pg xxviii and Table xv pg xxix, March 2024 version N Pt Conception and Nov 2023 version S Pt Conception). ACL values split by designated areas (S 34° 27' - 2027 = 20.1, 2028 = 22) (40° 10' to 34° 27' - 2027 = 107.7, 2028 = 107.1). Note: Values placed in GF FMP Amend 31 stock definition record for Area S of 40° 10'. Any sub-area records remain to track the separate assessments combined to single stock definition.
2027	Gopher	S of 40° 10'	2 (Year Based)	0.174	158	131	131	Gopher and black-and-yellow rockfishes are now combined in the 2019 assessment and resulting harvest specifications (documented in the gopher specifications). OFL based on a 50% SPR harvest rate projected in the 2019 assessment (Table g pg xix).
2028	Gopher	S of 40° 10'	2 (Year Based)	0.182	156	128	128	Gopher and black-and-yellow rockfishes are now combined in the 2019 assessment and resulting harvest specifications (documented in the gopher specifications). OFL based on a 50% SPR harvest rate projected in the 2019 assessment (Table g pg xix).
2027	Grass	S of 40° 10'	3 (Year Based)	0.222	60	46	46	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.

2028	Grass	S of 40° 10'	3 (Year Based)	0.222	60	46	46	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Kelp	S of 40° 10'	3 (Year Based)	0.222	28	22	22	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Kelp	S of 40° 10'	3 (Year Based)	0.222	28	22	22	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Olive	S of 40° 10'	3 (Year Based)	0.222	225	175	175	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Olive	S of 40° 10'	3 (Year Based)	0.222	225	175	175	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data

								1983-1989 and 1993-1999, all sources combined.
2027	Treefish	S of 40° 10'	3 (Year Based)	0.222	13	10	10	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Treefish	S of 40° 10'	3 (Year Based)	0.222	13	10	10	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Other Fish	CW			286	223	223	Sum of harvest specification contributions of component stocks in the complex.
2028	Other Fish	CW			286	223	223	Sum of harvest specification contributions of component stocks in the complex.
2027	Kelp Greenling	CA	3 (Year Based)	0.222	119	93	93	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).
2028	Kelp Greenling	CA	3 (Year Based)	0.222	119	93	93	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).
2027	Leopard Shark	CW	3 (Year Based)	0.222	167	130	130	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).
2028	Leopard Shark	CW	3 (Year Based)	0.222	167	130	130	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original

Year	Species							Basis
								NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).
2027	Other Flatfish	CW			9,367	6,577	6,577	Sum of harvest specification contributions of component stocks in the complex.
2028	Other Flatfish	CW			8,950	6,193	6,193	Sum of harvest specification contributions of component stocks in the complex.
2027	Butter Sole	CW	3 (Year Based)	0.398	5	3	3	Based on the average catch during 1994-1998 + a 60% discard rate estimated from the EDCP study (2020 SAFE; Table 2-19 pg 260).
2028	Butter Sole	CW	3 (Year Based)	0.398	5	3	3	Based on the average catch during 1994-1998 + a 60% discard rate estimated from the EDCP study (2020 SAFE; Table 2-19 pg 260).
2027	Curlfin Sole	CW	3 (Year Based)	0.398	8	5	5	Based on the average catch during 1994-1998 + a 60% discard rate estimated from the EDCP study (2020 SAFE; Table 2-19 pg 260).
2028	Curlfin Sole	CW	3 (Year Based)	0.398	8	5	5	Based on the average catch during 1994-1998 + a 60% discard rate estimated from the EDCP study (2020 SAFE; Table 2-19 pg 260).
2027	Flathead Sole	CW	3 (Year Based)	0.398	35	21	21	Max. catch = 35 mt in 2005 (2020 SAFE; Table 2-19 pg 260).
2028	Flathead Sole	CW	3 (Year Based)	0.398	35	21	21	Max. catch = 35 mt in 2005 (2020 SAFE; Table 2-19 pg 260).
2027	Pacific Sanddab	CW	3 (Year Based)	0.398	4,801	2,890	2,890	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).
2028	Pacific Sanddab	CW	3 (Year Based)	0.398	4,801	2,890	2,890	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).

Year	Species	Area	Category	Buffer	OFL	ABC	ACL	Notes
2027	Rex Sole	CW	2 (Year Based)	0.143	3,679	3,153	3,153	OFL projected using a 30% SPR harvest rate in the 2023 data moderate assessment, with revised projections per Council Sept 2023 request, Alternative 2 P*=0.45 (Table 1-4 pg 1-45; Agenda Item E.5 Supp Revised Attachment 1 Nov 2023).
2028	Rex Sole	CW	2 (Year Based)	0.151	3,261	2,769	2,769	OFL projected using a 30% SPR harvest rate in the 2023 data moderate assessment, with revised projections per Council Sept 2023 request, Alternative 2 P*=0.45 (Table 1-4 pg 1-45; Agenda Item E.5 Supp Revised Attachment 1 Nov 2023).
2027	Rock Sole	CW	3 (Year Based)	0.398	67	40	40	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).
2028	Rock Sole	CW	3 (Year Based)	0.398	67	40	40	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).
2027	Sand Sole	CW	3 (Year Based)	0.398	773	465	465	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).
2028	Sand Sole	CW	3 (Year Based)	0.398	773	465	465	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).
2027	Shelf Rockfish North	N of 40° 10'			1,673	1,342	1,342	Sum of harvest specification contributions of component stocks in the complex.
2028	Shelf Rockfish North	N of 40° 10'			1,665	1,333	1,333	Sum of harvest specification contributions of component stocks in the complex.
2027	Bocaccio	N of 40° 10'	3 (Year Based)	0.222	284	221	221	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).

Year	Stock	Area	Category					Notes
								Estimate only provided for North of 40 10 N. Lat.
2028	Bocaccio	N of 40° 10'	3 (Year Based)	0.222	284	221	221	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010). Estimate only provided for North of 40 10 N. Lat.
2027	Bronzespotted	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined. North = value is zero.
2028	Bronzespotted	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined. North = value is zero.
2027	Chameleon	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Chameleon	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Chilipepper	N of 40° 10'	1 (Year Based)	0.065	240	225	225	OFL from the 2025 full assessment, P* = 0.45 (Table h; Agenda Item G.3 Attachment 3 Sept 2025). OFLs are apportioned to the North (7%) and South (93%) of 40□10□ N lat. based on average historical landings. N of 40□10□ N lat. 2027 OFL = 3434.3 * 0.07 = 240.401; 2028 OFL = 3318.1 * 0.07 = 232.267. 2027 ABC = 3211.1 * 0.07 = 224.777; 2028 ABC = 3085.8 * 0.07 = 216.006.

Year	Species	Area						
2028	Chilipepper	N of 40° 10'	1 (Year Based)	0.070	232	216	216	OFL from the 2025 full assessment, P* = 0.45 (Table h; Agenda Item G.3 Attachment 3 Sept 2025). OFLs are apportioned to the North (7%) and South (93%) of 40☐10☐ N lat. based on average historical landings. N of 40☐10☐ N lat. 2027 OFL = 3434.3 * 0.07 = 240.401; 2028 OFL = 3318.1 * 0.07 = 232.267. 2027 ABC = 3211.1 * 0.07 = 224.777; 2028 ABC = 3085.8 * 0.07 = 216.006.
2027	Cowcod	N of 40° 10'	3 (Year Based)	0.222	1	0	0	OFL is based on the 2019 DB-SRA estimate in Appendix B of the 2019 cowcod assessment (Table F2 pg 179; Percentile 50% (Median), 2022 OFL value = 19.2). OFLs for 2021-2022 are apportioned to the north of 40☐10☐ N lat. (3%) and 40☐10☐ - 34☐27☐ N lat. (97%) based on cumulative historical catch (Table F3 pg 179; 1916-2018).
2028	Cowcod	N of 40° 10'	3 (Year Based)	0.222	1	0	0	OFL is based on the 2019 DB-SRA estimate in Appendix B of the 2019 cowcod assessment (Table F2 pg 179; Percentile 50% (Median), 2022 OFL value = 19.2). OFLs for 2021-2022 are apportioned to the north of 40☐10☐ N lat. (3%) and 40☐10☐ - 34☐27☐ N lat. (97%) based on cumulative historical catch (Table F3 pg 179; 1916-2018).
2027	Flag	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Flag	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data

								1983-1989 and 1993-1999, all sources combined.
2027	Freckled	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Freckled	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Greenblotched	N of 40° 10'	3 (Year Based)	0.222	1	1	1	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Greenblotched	N of 40° 10'	3 (Year Based)	0.222	1	1	1	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Greenspotted	42 - 40° 10'	2 (Year Based)	0.087	10	8	8	OFL is the SPR proxy MSY (= 95.6 mt) from the 2011 assessment (northern and southern models), with the default ABC (= 74.4 mt) calculated using a Category 3 sigma buffer (2.0) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025). Apportionment based on same relative amounts as in 2026; 42-40° 10' = 10.7%. 40° 10'-34° 27' = 37.5%. S 34° 27' = 51.9%.
2028	Greenspotted	42 - 40° 10'	2 (Year Based)	0.087	10	8	8	OFL is the SPR proxy MSY (= 95.6 mt) from the 2011 assessment (northern and southern models), with the default ABC (= 74.4 mt) calculated using a Category 3 sigma buffer (2.0) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025). Apportionment based on same relative amounts as in 2026; 42-40° 10' = 10.7%. 40° 10'-34° 27' = 37.5%. S 34° 27' = 51.9%.

2027	Greenspotted	WA - OR	3 (Year Based)	0.222	6	5	5	DCAC median value (Table 2; Appendix L: Catch-based allocation of the OFL for Greenspotted rockfish in northern California, and a yield estimate for U.S. water off Washington and Oregon, Agenda Item G.5.a. Supplemental Attachment 7, September 2011).
2028	Greenspotted	WA - OR	3 (Year Based)	0.222	6	5	5	DCAC median value (Table 2; Appendix L: Catch-based allocation of the OFL for Greenspotted rockfish in northern California, and a yield estimate for U.S. water off Washington and Oregon, Agenda Item G.5.a. Supplemental Attachment 7, September 2011).
2027	Greenstriped	N of 40° 10'	3 (Year Based)	0.222	624	485	485	OFL based on the MSY associated with the FMSY proxy in the 2009 assessment (Table d pg vii; Yield with SPR50% at SBSPR) per SSC recommendation (Agenda Item C.8.a Supp SSC Rpt 1 Sept 2021).The portion of the coastwide stock (738 mt total) North (84.5%) and South (15.5%) of 40□10□ N lat. is based on the mean of the 2003-2008 swept area biomass estimates from the NMFS trawl survey.
2028	Greenstriped	N of 40° 10'	3 (Year Based)	0.222	624	485	485	OFL based on the MSY associated with the FMSY proxy in the 2009 assessment (Table d pg vii; Yield with SPR50% at SBSPR) per SSC recommendation (Agenda Item C.8.a Supp SSC Rpt 1 Sept 2021).The portion of the coastwide stock (738 mt total) North (84.5%) and South (15.5%) of 40□10□ N lat. is based on the mean of the 2003-2008 swept area biomass estimates from the NMFS trawl survey.
2027	Halfbanded	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Halfbanded	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Harlequin	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]

2028	Harlequin	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Honeycomb	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Honeycomb	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Mexican	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Mexican	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Pink	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Pink	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Pinkrose	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Pinkrose	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Puget Sound	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Puget Sound	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Pygmy	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Pygmy	N of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Redstripe	N of 40° 10'	3 (Year Based)	0.222	270	210	210	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table

								65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Redstripe	N of 40° 10'	3 (Year Based)	0.222	270	210	210	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Rosethorn	N of 40° 10'	3 (Year Based)	0.222	13	10	10	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Rosethorn	N of 40° 10'	3 (Year Based)	0.222	13	10	10	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Rosy	N of 40° 10'	3 (Year Based)	0.222	3	2	2	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Rosy	N of 40° 10'	3 (Year Based)	0.222	3	2	2	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-

								SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Silvergray	N of 40° 10'	3 (Year Based)	0.222	159	124	124	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Silvergray	N of 40° 10'	3 (Year Based)	0.222	159	124	124	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Speckled	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Speckled	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Squarespot	42 - 40° 10'	2 (Year Based)	0.159				An OFL is not provided in this geographic area, per Section 4.3 (pg 21) of the 2021

								squarespot rockfish data-moderate assessment in California, as after 2000 it is assumed that 100% of removals are from South of 40□10□ N lat. and thus no apportionment of the overall OFL was made to this area.
2028	Squarespot	42 - 40° 10'	2 (Year Based)	0.167				An OFL is not provided in this geographic area, per Section 4.3 (pg 21) of the 2021 squarespot rockfish data-moderate assessment in California, as after 2000 it is assumed that 100% of removals are from South of 40□10□ N lat. and thus no apportionment of the overall OFL was made to this area.
2027	Starry	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Starry	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Stripetail	N of 40° 10'	3 (Year Based)	0.222	40	31	31	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.

Year	Species	Area	Category					Notes
2028	Stripetail	N of 40° 10'	3 (Year Based)	0.222	40	31	31	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Swordspine	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Swordspine	N of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Tiger	N of 40° 10'	3 (Year Based)	0.222	1	1	1	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Tiger	N of 40° 10'	3 (Year Based)	0.222	1	1	1	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data

								1983-1989 and 1993-1999, all sources combined.
2027	Vermilion	WA	2 (Year Based)	0.159				OFL from the 2023 projection update of the 2021 assessments, based on a stock definition of OR and WA (N of 42) (Table 6 pg 4; Agenda Item G.6 Supp Revised Attachment 2 Sept 2023). Note: Values placed in GF FMP Amend 31 stock definition record for Area = Washington and Oregon. These records remain to track the separate assessments combined to single stock definition.
2028	Vermilion	WA	2 (Year Based)	0.167				OFL from the 2023 projection update of the 2021 assessments, based on a stock definition of OR and WA (N of 42) (Table 6 pg 4; Agenda Item G.6 Supp Revised Attachment 2 Sept 2023). Note: Values placed in GF FMP Amend 31 stock definition record for Area = Washington and Oregon. These records remain to track the separate assessments combined to single stock definition.
2027	Vermilion	42 - 40° 10'	1 (Year Based)	0.083	7	6	6	OFL from 2023 projections of the 2021 assessments, based on a stock definition of California (S of 42) (Table 3; Agenda Item E.2 Supp Revised Attachment 5 November 2023). Stock apportionment to complex based on yield from the northern assessment model (4.4%) and southern complex is the remainder (95.6%) of the northern model yields plus the southern model yields.
2028	Vermilion	42 - 40° 10'	1 (Year Based)	0.087	7	6	6	OFL from 2023 projections of the 2021 assessments, based on a stock definition of California (S of 42) (Table 3; Agenda Item E.2 Supp Revised Attachment 5 November 2023). Stock apportionment to complex based on yield from the northern assessment model (4.4%) and southern complex is the remainder (95.6%) of the northern model yields plus the southern model yields.

2027	Vermilion	OR	1 (Year Based)	0.083				OFL from the 2023 projection update of the 2021 assessments, based on a stock definition of OR and WA (N of 42) (Table 6 pg 4; Agenda Item G.6 Supp Revised Attachment 2 Sept 2023).Note: Values placed in GF FMP Amend 31 stock definition record for Area = Washington and Oregon. These records remain to track the separate assessments combined to single stock definition.
2028	Vermilion	OR	1 (Year Based)	0.087				OFL from the 2023 projection update of the 2021 assessments, based on a stock definition of OR and WA (N of 42) (Table 6 pg 4; Agenda Item G.6 Supp Revised Attachment 2 Sept 2023).Note: Values placed in GF FMP Amend 31 stock definition record for Area = Washington and Oregon. These records remain to track the separate assessments combined to single stock definition.
2027	Vermilion	WA - OR			13	12	12	Based on the June 2025 SSC recommendation (Agenda Item E.6.a Supplemental SSC report 1 June 2025), OFL and ABC projections from each area assessment should be summed to calculate OFL and ABC values for the stock definition (N of 42). For 2027 and 2028, the OFL values are 13.13 mt and 12.83 mt and ABC values are 11.99 mt and 11.66 mt (P*=0.45) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025).
2028	Vermilion	WA - OR			13	12	12	Based on the June 2025 SSC recommendation (Agenda Item E.6.a Supplemental SSC report 1 June 2025), OFL and ABC projections from each area assessment should be summed to calculate OFL and ABC values for the stock definition (N of 42). For 2027 and 2028, the OFL values are 13.13 mt and 12.83 mt and ABC values are 11.99 mt and 11.66 mt (P*=0.45) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025).

2027	Shelf Rockfish South	S of 40° 10'			1,832	1,457	1,456	Sum of harvest specification contributions of component stocks in the complex.
2028	Shelf Rockfish South	S of 40° 10'			1,831	1,453	1,453	Sum of harvest specification contributions of component stocks in the complex.
2027	Bronzespotted	S of 40° 10'	3 (Year Based)	0.222	4	3	3	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Bronzespotted	S of 40° 10'	3 (Year Based)	0.222	4	3	3	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Chameleon	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Chameleon	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Flag	S of 40° 10'	3 (Year Based)	0.222	23	18	18	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Flag	S of 40° 10'	3 (Year Based)	0.222	23	18	18	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data

								1983-1989 and 1993-1999, all sources combined.
2027	Freckled	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Freckled	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Greenblotched	S of 40° 10'	3 (Year Based)	0.222	23	18	18	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Greenblotched	S of 40° 10'	3 (Year Based)	0.222	23	18	18	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Greenspotted	40° 10' - 34° 27'	2 (Year Based)		36	28	28	OFL is the SPR proxy MSY (= 95.6 mt) from the 2011 assessment (northern and southern models), with the default ABC (= 74.4 mt) calculated using a Category 3 sigma buffer (2.0) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025). Apportionment based on same relative amounts as in 2026; 42-40° 10' = 10.7%. 40° 10'-34° 27' = 37.5%. S 34° 27' = 51.9%.
2028	Greenspotted	40° 10' - 34° 27'	2 (Year Based)		36	28	28	OFL is the SPR proxy MSY (= 95.6 mt) from the 2011 assessment (northern and southern models), with the default ABC (= 74.4 mt) calculated using a Category 3 sigma buffer (2.0) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025). Apportionment based on same relative amounts as in 2026; 42-40° 10' = 10.7%. 40° 10'-34° 27' = 37.5%. S 34° 27' = 51.9%.

2027	Greenspotted	S of 34° 27'	2 (Year Based)		50	39	39	OFL is the SPR proxy MSY (= 95.6 mt) from the 2011 assessment (northern and southern models), with the default ABC (= 74.4 mt) calculated using a Category 3 sigma buffer (2.0) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025). Apportionment based on same relative amounts as in 2026; 42-40° 10' = 10.7%. 40° 10'-34° 27' = 37.5%. S 34° 27' = 51.9%.
2028	Greenspotted	S of 34° 27'	2 (Year Based)		50	39	39	OFL is the SPR proxy MSY (= 95.6 mt) from the 2011 assessment (northern and southern models), with the default ABC (= 74.4 mt) calculated using a Category 3 sigma buffer (2.0) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025). Apportionment based on same relative amounts as in 2026; 42-40° 10' = 10.7%. 40° 10'-34° 27' = 37.5%. S 34° 27' = 51.9%.
2027	Greenstriped	S of 40° 10'	3 (Year Based)	0.222	114	89	89	OFL based on the MSY associated with the FMSY proxy in the 2009 assessment (Table d pg vii; Yield with SPR50% at SBSPR) per SSC recommendation (Agenda Item C.8.a Supp SSC Rpt 1 Sept 2021). The portion of the coastwide stock (738 mt total) North (84.5%) and South (15.5%) of 40☐10☐ N lat. is based on the mean of the 2003-2008 swept area biomass estimates from the NMFS trawl survey.
2028	Greenstriped	S of 40° 10'	3 (Year Based)	0.222	114	89	89	OFL based on the MSY associated with the FMSY proxy in the 2009 assessment (Table d pg vii; Yield with SPR50% at SBSPR) per SSC recommendation (Agenda Item C.8.a Supp SSC Rpt 1 Sept 2021). The portion of the coastwide stock (738 mt total) North (84.5%) and South (15.5%) of 40☐10☐ N lat. is based on the mean of the 2003-2008 swept area biomass estimates from the NMFS trawl survey.
2027	Halfbanded	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]

2028	Halfbanded	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Harlequin	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Harlequin	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Honeycomb	S of 40° 10'	3 (Year Based)	0.222	10	8	8	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Honeycomb	S of 40° 10'	3 (Year Based)	0.222	10	8	8	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Mexican	S of 40° 10'	3 (Year Based)	0.222	5	4	4	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Mexican	S of 40° 10'	3 (Year Based)	0.222	5	4	4	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Pink	S of 40° 10'	3 (Year Based)	0.222	3	2	2	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original

								NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Pink	S of 40° 10'	3 (Year Based)	0.222	3	2	2	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Pinkrose	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Pinkrose	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Pygmy	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Pygmy	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Redstripe	S of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Redstripe	S of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Rosethorn	S of 40° 10'	3 (Year Based)	0.222	2	2	2	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original

								NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Rosethorn	S of 40° 10'	3 (Year Based)	0.222	2	2	2	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Rosy	S of 40° 10'	3 (Year Based)	0.222	45	35	35	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Rosy	S of 40° 10'	3 (Year Based)	0.222	45	35	35	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Silvergray	S of 40° 10'	3 (Year Based)	0.222	1	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.

2028	Silvergray	S of 40° 10'	3 (Year Based)	0.222	1	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Speckled	S of 40° 10'	3 (Year Based)	0.222	39	31	31	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Speckled	S of 40° 10'	3 (Year Based)	0.222	39	31	31	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Squarespot	S of 40° 10'	2 (Year Based)	0.159	8	6	6	OFL projected using a 50% SPR harvest rate from the 2021 squarespot rockfish data-moderate assessment in CA .Note buffer calculations and labels were later updated for Table 17 pg 47 in the assessment (Table 4, Agenda Item G.6 Revised Supp Attachment 2 Sept 2023). Precautionary in 2027 with ACL;ABC, and in 2028 above management target (40% unfished) with ACL=ABC.
2028	Squarespot	S of 40° 10'	2 (Year Based)	0.167	8	7	7	OFL projected using a 50% SPR harvest rate from the 2021 squarespot rockfish data-moderate assessment in CA .Note buffer calculations and labels were later updated for Table 17 pg 47 in the assessment (Table 4, Agenda Item G.6 Revised Supp Attachment 2 Sept 2023). Precautionary in 2027 with

								ACL;ABC, and in 2028 above management target (40% unfished) with ACL=ABC.
2027	Starry	S of 40° 10'	3 (Year Based)	0.222	63	49	49	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Starry	S of 40° 10'	3 (Year Based)	0.222	63	49	49	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Stripetail	S of 40° 10'	3 (Year Based)	0.222	24	18	18	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Stripetail	S of 40° 10'	3 (Year Based)	0.222	24	18	18	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Swordspine	S of 40° 10'	3 (Year Based)	0.222	14	11	11	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South

Year	Species	Area	Category					Notes
								complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Swordspine	S of 40° 10'	3 (Year Based)	0.222	14	11	11	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Tiger	S of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Tiger	S of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Vermilion	S of 34° 27'	2 (Year Based)	0.159				OFL from the 2023 projection update of the 2021 assessments, based on a stock definition of California (S of 42) (Table 3; Agenda Item E.2 Supp Revised Attachment 5 November 2023). Stock apportionment to N and S 40° 10' complexes based on yield from the northern assessment model (4.4%) and southern complex is the remainder (95.6%) of the northern model yields plus the southern model yields. Note: Values placed in GF FMP Amend 31 stock definition record. Any sub-area records remain to track the

								separate assessments combined to single stock definition.
2028	Vermilion	S of 34° 27'	2 (Year Based)	0.167				OFL from the 2023 projection update of the 2021 assessments, based on a stock definition of California (S of 42) (Table 3; Agenda Item E.2 Supp Revised Attachment 5 November 2023). Stock apportionment to N and S 40° 10' complexes based on yield from the northern assessment model (4.4%) and southern complex is the remainder (95.6%) of the northern model yields plus the southern model yields. Note: Values placed in GF FMP Amend 31 stock definition record. Any sub-area records remain to track the separate assessments combined to single stock definition.
2027	Vermilion	40° 10' - 34° 27'	1 (Year Based)	0.083				OFL from the 2023 projection update of the 2021 assessments, based on a stock definition of California (S of 42) (Table 3; Agenda Item E.2 Supp Revised Attachment 5 November 2023). Stock apportionment to N and S 40° 10' complexes based on yield from the northern assessment model (4.4%) and southern complex is the remainder (95.6%) of the northern model yields plus the southern model yields. Note: Values placed in GF FMP Amend 31 stock definition record. Any sub-area records remain to track the separate assessments combined to single stock definition.
2028	Vermilion	40° 10' - 34° 27'	1 (Year Based)	0.087				OFL from the 2023 projection update of the 2021 assessments, based on a stock definition of California (S of 42) (Table 3; Agenda Item E.2 Supp Revised Attachment 5 November 2023). Stock apportionment to N and S 40° 10' complexes based on yield from the northern assessment model (4.4%) and southern complex is the remainder (95.6%) of the northern model yields plus the southern model yields. Note: Values placed in GF FMP Amend 31 stock definition record.

Year	Species	Area	Category		OFL	ABC	ACL	Notes
								Any sub-area records remain to track the separate assessments combined to single stock definition.
2027	Vermilion	S of 40° 10'			305	268	268	OFL from 2023 catch-only projections of the 2021 assessments, based on a stock definition of California (S of 42) (Table 3; Agenda Item E.2 Supp Revised Attachment 5 November 2023). Stock apportionment to N and S 40° 10' complexes based on yield from the northern assessment model (4.4%) and southern complex is the remainder (95.6%) of the northern model yields plus the southern model yields. Note: Values placed in GF FMP Amend 31 stock definition record. Any sub-area records remain to track the separate assessments combined to single stock definition.
2028	Vermilion	S of 40° 10'			303	264	264	OFL from 2023 catch-only projections of the 2021 assessments, based on a stock definition of California (S of 42) (Table 3; Agenda Item E.2 Supp Revised Attachment 5 November 2023). Stock apportionment to N and S 40° 10' complexes based on yield from the northern assessment model (4.4%) and southern complex is the remainder (95.6%) of the northern model yields plus the southern model yields. Note: Values placed in GF FMP Amend 31 stock definition record. Any sub-area records remain to track the separate assessments combined to single stock definition.
2027	Yellowtail Rockfish	S of 40° 10'	3 (Year Based)	0.222	1,064	828	828	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).
2028	Yellowtail Rockfish	S of 40° 10'	3 (Year Based)	0.222	1,064	828	828	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).

Year	Stock	Area	Category	P*	OFL	ABC	ACL	Notes
2027	Slope Rockfish North	N of 40° 10'			1,966	1,623	1,623	Sum of harvest specification contributions of component stocks in the complex.
2028	Slope Rockfish North	N of 40° 10'			1,952	1,602	1,602	Sum of harvest specification contributions of component stocks in the complex.
2027	Aurora	N of 40° 10'	1 (Year Based)	0.117	17	15	15	Extended projections recommended by SSC in September 2025 for default 2027-28 harvest specifications, based on the 2013 assessment (P* = 0.45), ABC = ACL (Table 2, Agenda Item F.3 Attachment 2 November 2025). The portion of the coastwide stock north (19%) and south (81%) of 40□10□ N lat. is based on average survey biomass.
2028	Aurora	N of 40° 10'	1 (Year Based)	0.121	17	15	15	Extended projections recommended by SSC in September 2025 for default 2027-28 harvest specifications, based on the 2013 assessment (P* = 0.45), ABC = ACL (Table 2, Agenda Item F.3 Attachment 2 November 2025). The portion of the coastwide stock north (19%) and south (81%) of 40□10□ N lat. is based on average survey biomass.
2027	Bank	N of 40° 10'	3 (Year Based)	0.222	17	13	13	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Bank	N of 40° 10'	3 (Year Based)	0.222	17	13	13	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Blackgill Rockfish	N of 40° 10'	3 (Year Based)	0.222	5	4	4	Revisions to OFL Contributions for Category 3 Stocks (Dick 2011). Original NOAA Tech

Year	Species	Area	Category					Notes
								Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).
2028	Blackgill Rockfish	N of 40° 10'	3 (Year Based)	0.222	5	4	4	Revisions to OFL Contributions for Category 3 Stocks (Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).
2027	Redbanded	N of 40° 10'	3 (Year Based)	0.222	45	35	35	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Redbanded	N of 40° 10'	3 (Year Based)	0.222	45	35	35	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Rougheye/Blackspotted	N of 40° 10'	2 (Year Based)	0.126	947	827	827	OFL based on the 2025 full assessment, P* = 0.45 (Table ix pg xviii; Agenda Item G.3 Revised Attachment 4 Sept 2025). The coastwide OFLs are apportioned north (98%) and south (2%) based on average landings during 1985-2012. N of 40° 10' 2027 OFL = 966 * 0.98 = 946.68; 2028 OFL = 955 * 0.98 = 935.9.
2028	Rougheye/Blackspotted	N of 40° 10'	2 (Year Based)	0.135	936	810	810	OFL based on the 2025 full assessment, P* = 0.45 (Table ix pg xviii; Agenda Item G.3 Revised Attachment 4 Sept 2025). The coastwide OFLs are apportioned north (98%) and south (2%) based on average landings during 1985-2012. N of 40° 10' 2027 OFL = 966 * 0.98 = 946.68; 2028 OFL = 955 * 0.98 = 935.9.

Year	Stock	Area	Category	Buffer	OFL	ABC	ACL	Notes
2027	Sharpchin	N of 40° 10'	2 (Year Based)	0.220	276	215	215	OFL from the 2019 catch-only projections of the 2013 assessment (Table 15 pg 8; Agenda Item H.8 Supp Attachment 2 September 2019), but with sigma capped at 2.0 for buffer calculation with P* = 0.45, the buffer fraction multiplier = 0.778 (Agenda Item G.6.a. Supplemental SSC Report 1 September 2025). OFLs are apportioned to the North (80%) and South (20%) of 40□10□ N lat. based on average swept area biomass estimates from the triennial survey. N of 40□10□ N lat. 2027 OFL = 345 * 0.8 = 276; 2028 OFL = 341 * 0.8 = 272.8.
2028	Sharpchin	N of 40° 10'	2 (Year Based)	0.227	273	212	212	OFL from the 2019 catch-only projections of the 2013 assessment (Table 15 pg 8; Agenda Item H.8 Supp Attachment 2 September 2019), but with sigma capped at 2.0 for buffer calculation with P* = 0.45, the buffer fraction multiplier = 0.778 (Agenda Item G.6.a. Supplemental SSC Report 1 September 2025). OFLs are apportioned to the North (80%) and South (20%) of 40□10□ N lat. based on average swept area biomass estimates from the triennial survey. N of 40□10□ N lat. 2027 OFL = 345 * 0.8 = 276; 2028 OFL = 341 * 0.8 = 272.8.
2027	Shortraker	N of 40° 10'	3 (Year Based)	0.222	19	15	15	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Shortraker	N of 40° 10'	3 (Year Based)	0.222	19	15	15	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data

								1983-1989 and 1993-1999, all sources combined.
2027	Splitnose	N of 40° 10'	1 (Year Based)	0.044	448	348	348	OFL is the SPR proxy MSY based on the 2009 assessment, with an ABC calculated using a default Category 3 sigma buffer (2.0) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025). Status quo apportionment is 36% N of 40° 10' and 64% S of 40° 10'. N of 40° 10' OFL 1244 * 0.36 = 447.84; ABC 968 * 0.36 = 348.48.
2028	Splitnose	N of 40° 10'	1 (Year Based)	0.044	448	348	348	OFL is the SPR proxy MSY based on the 2009 assessment, with an ABC calculated using a default Category 3 sigma buffer (2.0) (Agenda Item G.6.a Supplemental SSC Report 1 September 2025). Status quo apportionment is 36% N of 40° 10' and 64% S of 40° 10'. N of 40° 10' OFL 1244 * 0.36 = 447.84; ABC 968 * 0.36 = 348.48.
2027	Yellowmouth	N of 40° 10'	3 (Year Based)	0.222	192	150	150	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Yellowmouth	N of 40° 10'	3 (Year Based)	0.222	192	150	150	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Slope Rockfish South	S of 40° 10'			878	699	699	Sum of harvest specification contributions of component stocks in the complex. The slope rf south has a customized allocation method, see pcouncil.org/documents/2024/07/2025-26-preferred-groundfish-harvest-

Year	Stock	Area	Category		OFL	ABC	ACL	
								specifications-and-management-measures-council-analytical-document.pdf/
2028	Slope Rockfish South	S of 40° 10'			877	696	696	Sum of harvest specification contributions of component stocks in the complex. The slope rf south has a customized allocation method, see pcouncil.org/documents/2024/07/2025-26-preferred-groundfish-harvest-specifications-and-management-measures-council-analytical-document.pdf/
2027	Aurora	S of 40° 10'	1 (Year Based)	0.117	73	65	65	Extended projections recommended by SSC in September 2025 for default 2027-28 harvest specifications, based on the 2013 assessment (P* = 0.45), ABC = ACL (Table 2, Agenda Item F.3 Attachment 2 November 2025). The portion of the coastwide stock north (19%) and south (81%) of 40□10□ N lat. is based on average survey biomass.
2028	Aurora	S of 40° 10'	1 (Year Based)	0.121	73	64	64	Extended projections recommended by SSC in September 2025 for default 2027-28 harvest specifications, based on the 2013 assessment (P* = 0.45), ABC = ACL (Table 2, Agenda Item F.3 Attachment 2 November 2025). The portion of the coastwide stock north (19%) and south (81%) of 40□10□ N lat. is based on average survey biomass.
2027	Bank	S of 40° 10'	3 (Year Based)	0.222	503	392	392	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Bank	S of 40° 10'	3 (Year Based)	0.222	503	392	392	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data

								1983-1989 and 1993-1999, all sources combined.
2027	Blackgill Rockfish	S of 40° 10'	2 (Year Based)	0.190	202	164	164	Values from a 2019 catch-only update/projection from the 2017 assessment update of blackgill rockfish in the Conception and Monterey INPFC areas (Table f pg x; Agenda Item H.5 Attachment 16 September 2019).
2028	Blackgill Rockfish	S of 40° 10'	2 (Year Based)	0.197	202	162	162	Values from a 2019 catch-only update/projection from the 2017 assessment update of blackgill rockfish in the Conception and Monterey INPFC areas (Table f pg x; Agenda Item H.5 Attachment 16 September 2019).
2027	Pacific Ocean Perch	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2028	Pacific Ocean Perch	S of 40° 10'	3 (Year Based)	0.222				[No specifications used for stock/area]
2027	Redbanded	S of 40° 10'	3 (Year Based)	0.222	10	8	8	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Redbanded	S of 40° 10'	3 (Year Based)	0.222	10	8	8	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Rougheye/Blackspotted	S of 40° 10'	2 (Year Based)	0.126	19	17	17	OFL based on the 2025 full assessment, P* = 0.45 (Table ix pg xviii; Agenda Item G.3 Revised Attachment 4 Sept 2025). The coastwide OFLs are apportioned north (98%) and south (2%) based on average landings

Year	Species	Area	Category					Reasoning
								during 1985-2012. S of 40° 10' 2027 OFL = 966 * 0.02 = 19.32; 2028 OFL = 955 * 0.02 = 19.1.
2028	Rougheye/Blackspotted	S of 40° 10'	2 (Year Based)	0.135	19	17	17	OFL based on the 2025 full assessment, P* = 0.45 (Table ix pg xviii; Agenda Item G.3 Revised Attachment 4 Sept 2025). The coastwide OFLs are apportioned north (98%) and south (2%) based on average landings during 1985-2012. S of 40° 10' 2027 OFL = 966 * 0.02 = 19.32; 2028 OFL = 955 * 0.02 = 19.1.
2027	Sharpchin	S of 40° 10'	2 (Year Based)	0.220	69	54	54	OFL from the 2019 catch-only projections of the 2013 assessment (Table 15 pg 8; Agenda Item H.8 Supp Attachment 2 September 2019), but with sigma capped at 2.0 for buffer calculation with P* = 0.45, the buffer fraction multiplier = 0.778 (Agenda Item G.6.a. Supplemental SSC Report 1 September 2025). OFLs are apportioned to the North (80%) and South (20%) of 40☐10☐ N lat. based on average swept area biomass estimates from the triennial survey. S of 40☐10☐ N lat. 2027 OFL = 345 * 0.2 = 69; 2028 OFL = 341 * 0.2 = 68.2.
2028	Sharpchin	S of 40° 10'	2 (Year Based)	0.227	68	53	53	OFL from the 2019 catch-only projections of the 2013 assessment (Table 15 pg 8; Agenda Item H.8 Supp Attachment 2 September 2019), but with sigma capped at 2.0 for buffer calculation with P* = 0.45, the buffer fraction multiplier = 0.778 (Agenda Item G.6.a. Supplemental SSC Report 1 September 2025). OFLs are apportioned to the North (80%) and South (20%) of 40☐10☐ N lat. based on average swept area biomass estimates from the triennial survey. S of 40☐10☐ N lat. 2027 OFL = 345 * 0.2 = 69; 2028 OFL = 341 * 0.2 = 68.2.
2027	Shortraker	S of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-

								SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Shortraker	S of 40° 10'	3 (Year Based)	0.222	0	0	0	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2027	Yellowmouth	S of 40° 10'	3 (Year Based)	0.222	1	1	1	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
2028	Yellowmouth	S of 40° 10'	3 (Year Based)	0.222	1	1	1	Revisions to OFL Contributions for Category 3 Stocks (Table 2, Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010), Table 65 apportionment % to North and South complexes based on cumulative catch data 1983-1989 and 1993-1999, all sources combined.
[a]Pacific whiting ACLs are set through an annual US/Canada treaty process external to the Council								