SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON INITIAL HARVEST SPECIFICATIONS AND MANAGEMENT MEASURE ACTIONS FOR 2027-28

The SSC reviewed 1) the proposed overfishing limits (OFLs) for 2027 and 2028 under the default harvest control rules, 2) the recommended category designation for each stock, which are reported within Agenda Item G.6 Supplemental Attachment 1, and 3) the constant or time-varying sigma values used to calculate annual acceptable biological catch (ABC) buffers.

The SSC discussed the following issues:

A. Errors in the sigma values used to calculate ABC values. Two types of errors were found during an initial review of the sigmas for calculating ABC values.
    a. Cases where the standard calculation of the time-varying sigma led to sigma values greater than 2.0, whereas the SSC has set a cap of 2.0 (the constant value associated with Category 3 stocks) for sigma.
    b. Cases where the assessment was conducted well before the time-varying sigma rules were applied, and the ABC values from the assessment or projection relied on old, constant values of sigma.

B. Apportionment of OFL, ABC, and ACL values to latitudinally defined areas. These numbers are sometimes available from stock assessment tables, and other times are calculated manually for the specifications using status quo proportions (see Notes/Description in Table 1 Agenda Item G.6 Supplemental Attachment 1).

C. Accounting for the natural mortality rate *M* in calculating the time-varying component of sigma for scientific uncertainty buffer calculations. Wetzel and Hamel (2023) proposed an approach to calculate the time-varying multiplier of the base sigma for stocks with larger values of *M* (greater than 0.15 yr^{-1}). The approach developed in Wetzel and Hamel (2023) uses the proportional rate of change in sigma = 0.52 * M. The base sigma for category 1 and 2 stocks should be multiplied by 1 + this rate for determining the first year of management. This approach has been used in Coastal Pelagic Species assessments to calculate ABC values since 2023, but was not applied to groundfish assessments in that year. For the 2027-2028 biennium, the adjustment for species with *M* greater than 0.15 yr^{-1} is applied only for assessments and catch-only projections conducted in 2025 (chilipepper rockfish (Table 4 in Agenda Item G.6 Supplemental Attachment 2), Oregon black rockfish (Agenda Item G.3 Revised Attachment 17), bocaccio (Agenda Item G.3 Revised Attachment 18). During 2026, the SSC will evaluate adopting this approach for all stocks with *M* greater than 0.15 yr^{-1}, for the 2029-2030 specifications process. The impact of this change on expected ABC values should be considered during stock assessment prioritization for the next cycle.

D. Using proxy MSY values for OFLs for management years where assessments are greater than 15 years old, and applying the Category 3 sigma value for buffer calculations. The SSC considers assessments greater than 15 years old to be highly uncertain, and intends to treat them as data poor assessments (Category 3) for years 16 and beyond (i.e., assessments conducted in 2011 or earlier for this cycle), using the appropriate proxy MSY values as OFL values, except in cases where the stock is predicted to be below the

target stock size. The SSC also recommends this approach for a small set of other assessments approaching 16 years old, where appropriate OFL values are not available and the MSY values would not be constraining. The SSC notes that the impact of this change on OFL and ABC values for 2029 and 2030 from stocks last assessed in 2013 should be considered during stock assessment prioritization for the next cycle.

The SSC has the following specific updates and recommendations for the following situations:

Specifications for 2027-2028 that are not yet available:

- English sole: Projections from the 2013 data-moderate assessment provided information on OFLs through 2026. Recent catch is about 5% of the MSY of 4,072 mt. The SSC suggests using the MSY as the OFL, with a default ABC of 3,168 mt based upon a Category 3 sigma for both 2027 and 2028 rather than requesting a new projection.
- Splitnose rockfish: The last assessment for this stock was conducted in 2009. Therefore, the OFL is the SPR proxy MSY of 1,244 mt, with a default ABC of 968 mt for both 2027 and 2028 based upon a category 3 sigma.
- Kelp greenling off Oregon: Updated projections of the 2015 benchmark assessment ended in 2026. The SSC suggests requesting a new projection to provide specifications for this cycle.
- Aurora rockfish: A projection in 2023 based on the 2013 benchmark assessment provided information on OFL values through 2026. The SSC suggests requesting new projection to provide specifications for this cycle.
- Cowcod north of Point Conception (34° 27' N, lat.): In the last cycle, the OFLs were rolled over from the previous cycle. The OFL values for the two years differed. The SSC will continue to roll over the OFLs, but set the OFL for both years at 19.2 mt, the value for 2026, noting that 3% of this is apportioned to the area north of 40° 10′ N.
- For canary rockfish, petrale sole, and shortpine thornyhead: OFL and ABC values for 2027 and 2028 will depend on whether any changes to the 2026 OFL, ABC and ACLs are adopted by the Council at this meeting. If 2026 harvest specifications are modified by the Council, revised 2027-28 OFL and ABC values would be recommended by the SSC at the November 2025 Council meeting.
- Greenspotted rockfish: The last benchmark assessment was conducted in 2011. The combined northern and southern models estimated stock status to be at or above 40% of the unfished level at the end of the projection period (2022), and the SSC recommends adopting the SPR proxy MSY of 95.6 mt as the OFL with a default ABC of 74.4 based on a Category 3 sigma for both 2027 and 2028. Apportionment should be based on the same relative amounts as in 2026.

Incorrect sigma values and buffers in default harvest control rule specifications:

- For longspine thornyhead, brown rockfish, and sharpchin rockfish, for which data-moderate (Category 2) assessments were conducted in 2019, the time-varying sigma value used for the 2028 buffer calculation was greater than 2.0, which is the cap set by the SSC. Thus, the ABCs values for 2028 are incorrect in the draft default specifications.
    - Longspine thornyhead: The correct ABC for 2028 is 2413 mt. The associated ACLs in 2028 for north and south of 34°27' would then be 1833.74 and 579.08 mt respectively.

    - Brown rockfish: The correct 2028 ABC contributions for north and south of 40°10' are 1.64 and 140.89 mt respectively.
    - Sharpchin rockfish: The correct 2028 ABC contributions for north and south of 40°10' are 212.24 and 53.06 mt respectively
- Vermilion (OR and WA): 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 OFLs and ABCs. For 2027 and 2028, the OFL values are 13.13 mt and 12.83 mt respectively, and the ABC values are 11.99 mt and 11.66 mt, respectively.

PFMC
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Table 1. Overview of SSC September 2025 recommendations which modify those published in G.6 Supplemental Attachment 1 with **SSC recommendations or technical corrections for 2027 and 2028 harvest specifications** (mt) for west coast groundfish stocks and stock complexes under default harvest control rules. See statement narrative above for more detail; Blue highlighted stock/complex = changes. Stock complexes with any modification to component species were retained to display the entire complex. This table does not include all stocks/complexes in Attachment 1.

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Bocaccio	*S of 4010*	*2027*	*1*	*0.45*	***2542***	***2265***	***2265***	*2017*	*OFL from 2025 catch only projections based on the 2017 assessment; 7.4% reduction to subtract the portion of the assessed stock north of 4010 N. lat. (Table 1 pg 1;* ***Agenda Item G.3 Revised Attachment 18 Sept 2025) with M >0.15 varying buffer****, pending Council adoption.* *S of 4010 N. lat. 2027 OFL 2745 - (2745*0.074) = 2541.87; 2028 OFL 2634 - (2634*0.074) = 2439.084; 2027 ABC 2446 - (2446*0.074) = 2264.996; 2028 ABC 2334 - (2334*0.074) = 2161.284*
Bocaccio	*S of 4010*	*2028*	*1*	*0.45*	***2439***	***2161***	***2161***	*2017*	
Canary Rockfish	*CW*	*2027*	*1*	*0.45*	*696*	*644*	*608*	*2023*	*OFL from the 2025 catch only projections based on the 2023 full assessment. P*=0.45 and assumed full attainment of ACL (Table 1,* ***Agenda Item G.3 Attachment 14 Sept 2025****), pending Council adoption. Precautionary, ACL<ABC.*
Canary Rockfish	*CW*	*2028*	*1*	*0.45*	*723*	*667*	*625*	*2023*	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Chilipepper	*S of 4010*	*2027*	*1*	*0.45*	***3194***	***2980***	***2980***	*2025*	*OFL from the 2025 full assessment, P* = 0.45, pending Council adoption (Table 4;* ***Agenda Item G.6 Supp Attachment 2 Sept 2025), with M >0.15 varying buffer****. OFLs are apportioned to the North (7%) and South (93%) of 4010 N lat. based on average historical landings.* *S of 4010 N lat. 2027 OFL = 3434.3 * 0.93 = 3193.89; 2028 OFL = 3318.7 * 0.93 = 3086.391. 2027 ABC = 3204.2 * 0.93 = 2979.906; 2028 ABC = 3079.7 * 0.93 = 2864.121*
Chilipepper	*S of 4010*	*2028*	*1*	*0.45*	***3086***	***2864***	***2864***	*2025*	
Cowcod	*S of 4010*	*2027*						*2019*	*Harvest specifications are the sum of assessed area projections (South of Pt Conception 3427 N. lat.) and DBSRA estimates (4010 to 3427 N. lat.).*
Cowcod	*S of 4010*	*2028*						*2019*	
Cowcod	S of 3427	2027	2	0.40	92.1	62.628	62.628	2019	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 3427 N. lat.; Agenda Item H.6 Attachment 2 November 2019).
Cowcod	S of 3427	2028	2	0.40	91.9	61.2973	61.2973	2019	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Cowcod	4010 - 3427	2027	3	0.40	**18.624**	**11.2116**	**11.2116**	2019	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 Sept 2025).*** OFLs are apportioned to the north of 4010 N lat. (3%) and 4010 - 3427 N lat. (97%) based on cumulative historical catch (Table F3 pg 179; 1916-2018).
Cowcod	4010 - 3427	2028	3	0.40	18.624	11.2116	11.2116	2019	
Darkblotched Rockfish	*CW*	*2027*	*1*	*0.45*	*859*	*773*	*773*	*2017*	*OFL from the 2025 catch-only projections based on the 2017 assessment (Table 1, **Agenda Item G.3 Attachment 16 Sept 2025**), pending Council adoption.*
Darkblotched Rockfish	*CW*	*2028*	*1*	*0.45*	*842*	*754*	*754*	*2017*	
English Sole	*CW*	*2027*	*2*	*0.45*	***4072***	***3168***	***3168***	*2013*	*OFL is the MSY from the 2013 data-moderate assessment, with the default ABC calculated using a Category 3 sigma buffer (**Agenda Item G.6.a Supplemental SSC Report 1 Sept 2025**).*
English Sole	*CW*	*2028*	*2*	*0.45*	***4072***	***3168***	***3168***	*2013*	
Longspine Thornyhead	*CW*	*2027*	*2*	*0.40*	*4076*	*2471*		*2013*	*Coastwide OFL projected using a 50% SPR harvest rate in 2019 catch-only projections of the 2013 assessment. **Sigma is capped at 2.0 for buffer calculation - with P* = 0.4, buffer fraction multiplier = 0.602 (Agenda Item G.6.a Supplemental SSC Report 1 Sept 2025).** The coastwide ABC (P* = 0.4) is apportioned N (76%) and S (24%) of 3427 N lat. to determine ACLs based on the 2003-2012 average swept area biomass from the NMFS trawl survey.*

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Longspine Thornyhead	*CW*	*2028*	*2*	*0.40*	***4008***	***2413***		*2013*	
Longspine Thornyhead	*S of 3427*	*2027*	*2*	*0.40*			*593.13*	*2013*	*Coastwide OFL projected using a 50% SPR harvest rate in 2019 catch-only projections of the 2013 assessment.* ***Sigma is capped at 2.0 for buffer calculation - with P* = 0.4, buffer fraction multiplier = 0.602*** *(**Agenda Item G.6.a Supplemental SSC Report 1 Sept 2025**). (The coastwide ABC (P* = 0.4) is apportioned N (76%) and S (24%) of 3427 N lat. to determine ACLs based on the 2003-2012 average swept area biomass from the NMFS trawl survey. S of 3427 N lat. 2027 ACL = ABC 2,471.39 * 0.24 = 593.13;* ***2028 ACL = ABC 2,412.82* 0.24 = 579.08.***
Longspine Thornyhead	*S of 3427*	*2028*	*2*	*0.40*			***579.08***	*2013*	
Longspine Thornyhead	*N of 3427*	*2027*	*2*	*0.40*			*1878.26*	*2013*	*Coastwide OFL projected using a 50% SPR harvest rate in 2019 catch-only projections of the 2013 assessment.* ***Sigma is capped at 2.0 for buffer calculation - with P* = 0.4, buffer fraction multiplier = 0.602*** *(**Agenda Item G.6.a Supplemental SSC Report 1 Sept 2025**).The coastwide ABC (P* = 0.4) is apportioned N (76%) and S (24%) of 3427 N lat. to determine ACLs based on the 2003-2012 average swept area biomass from the NMFS trawl survey. N of 3427 N lat. 2027 ACL = ABC 2,471.39 * 0.76 = 1878.26;* ***2028 ACL = ABC 2,412.82 * 0.76 = 1833.74.***
Longspine Thornyhead	*N of 3427*	*2028*	*2*	*0.40*			***1833.74***	*2013*	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Petrale Sole	*CW*	*2027*	*1*	*0.45*	*2701*	*2501*	*2501*	*2023*	*OFL from the 2025 catch-only projections based on the 2023 full assessment, P*=0.45 and assumed full attainment of ACL (Table 1, **Agenda Item G.3 Attachment 13 Sept 2025**), pending Council adoption.*
Petrale Sole	*CW*	*2028*	*1*	*0.45*	*2670*	*2462*	*2462*	*2023*	
Quillback	*CA*	*2027*			*13*	*12*	*12*	*2025*	*Harvest specifications for 2027-2028 based on 2025 full assessment, default HCR P*=0.45 based on Category 1b with sigma = 0.75 (**Agenda Item G.6 Attachment 2 September 2025**), Council adoption. Stock defined as CA (S of 42).*
Quillback	*CA*	*2028*			*13*	*12*	*12*	*2025*	
Sablefish	*CW*	*2027*	*1*	*0.45*	*14935*	*13964*		*2025*	*OFL based on the 2025 full assessment, P* = 0.45, pending Council adoption (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.*
Sablefish	*CW*	*2028*	*1*	*0.45*	*16240*	*15103*		*2025*	
Sablefish	*S of 36*	*2027*	*1*	*0.45*			*3002*	*2025*	*OFL based on the 2025 full assessment, P* = 0.45, pending Council adoption (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.*
Sablefish	*S of 36*	*2028*	*1*	*0.45*			*3247*	*2025*	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Sablefish	*N of 36*	*2027*	*1*	*0.45*			*10962*	*2025*	*OFL based on the 2025 full assessment, P* = 0.45, pending Council adoption (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.*
Sablefish	*N of 36*	*2028*	*1*	*0.45*			*11856*	*2025*	
Shortspine Thornyhead	*CW*	*2027*	*2*	*0.45*	*995*	*853*	*848*	*2023*	*OFL from the 2025 catch only projections based on the 2023 data-moderate assessment (Table 1, **Agenda Item G.3 Attachment 15 Sept 2025**), pending Council adoption. Precautionary ACL < ABC, 40-10 rule, P*=0.45 with assumed full attainment of ACL. Shortspine Thornyhead has a commercial ACT North of 34 27'N. Lat.*
Shortspine Thornyhead	*CW*	*2028*	*2*	*0.45*	*1015*	*861*	*857*	*2023*	
Splitnose	*S of 4010*	*2027*	*1*	*0.45*	***796***	***620***	***620***	*2009*	*The OFL is the SPR proxy MSY of 1,244 mt based on the 2009 assessment (Table 23), with a default ABC of 968 mt calculated using a category 3 sigma (**Agenda Item G.6.a Supplemental SSC Report 1 Sept 2025**). Status quo apportionment is 36% N of 4010 and 64% S of 4010. S of 4010 OFL 1244 * 0.64 = 796.16, ABC 968 * 0.64 = 619.52*
Splitnose	*S of 4010*	*2028*	*1*	*0.45*	***796***	***620***	***620***	*2009*	
Widow Rockfish	*CW*	*2027*							*2027-2028 harvest specifications are not yet provided, as the SSC recommends further review of the 2025 Assessment.*

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Widow Rockfish	*CW*	*2028*							
Yelloweye Rockfish	*CW*	*2027*	*1*	*0.40*	*129*	*113*	*113*	*2025*	*OFL based on the 2025 update of the 2017 assessment (Table vii pg xvi, **Agenda Item G.3 Attachment 6 Sept 2025**), pending Council adoption. Stock presumed to be rebuilt pending BSIA determination.*
Yelloweye Rockfish	*CW*	*2028*	*1*	*0.40*	*131*	*113*	*113*	*2025*	
Yellowtail Rockfish	*N of 4010*	*2027*	*1*	*0.45*	*5051*	*4723*	*4723*	*2025*	*OFL is based on the 2025 full assessment (Table vii pg xvi; **Agenda Item G.3 Attachment 1 Sept 2025**), pending Council adoption.*
Yellowtail Rockfish	*N of 4010*	*2028*	*1*	*0.45*	*4882*	*4540*	*4540*	*2025*	
Blue/Deacon/Black Rockfish	*OR*	*2027*		*0.45*					*Sum of harvest specification contributions of component stocks in the complex.*
Blue/Deacon/Black Rockfish	*OR*	*2028*		*0.45*					
Black Rockfish	*OR*	*2027*	*1*	*0.45*	***402***	***371***	***371***	*2023*	*OFL from the 2025 catch only projections based on the 2023 full assessment (Table 1, **Agenda Item G.3 Revised Attachment 17 Sept 2025) with M >0.15 varying buffer**, pending Council adoption.*
Black Rockfish	*OR*	*2028*	*1*	*0.45*	***410***	***376***	***376***	*2023*	
Blue	OR	2027	2	0.45	93.473	75.7131	75.7131	2017	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.
Blue	OR	2028	2	0.45	92.33	74.141	74.141	2017	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Cabezon/Kelp Greenling	*OR*	*2027*							*Sum of harvest specification contributions of component stocks in the complex.*
Cabezon/Kelp Greenling	*OR*	*2028*							
Cabezon	OR	2027	1	0.45	51.5	46.8135	46.8135	2019	OFL projected using a 45% SPR from the 2019 assessment, Oregon model (Table ES20 pg 43).
Cabezon	OR	2028	1	0.45	51.1	46.1944	46.1944	2019	
Kelp Greenling	*OR*	*2027*	*1*	*0.45*				*2015*	***A request for extended projections is recommended by the SSC to utilize for default harvest specifications for 2027-28.***
Kelp Greenling	*OR*	*2028*	*1*	*0.45*				*2015*	
Nearshore Rockfish North	*N of 4010*	*2027*							*Sum of harvest specification contributions of component stocks in the complex.*
Nearshore Rockfish North	*N of 4010*	*2028*							
Black and Yellow	N of 4010	2027	3	0.45					
Black and Yellow	N of 4010	2028	3	0.45					
Blue	42 - 4010	2027	2	0.45	33.466	27.1075	27.1075	2017	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 4010 N lat. (see Appendix D of the 2017 Assessment, pg 361). N of 4010 N lat. 2027 OFL = 334.66 * 0.10 = 33.466; 2028 OFL = 334.42 * 0.10 = 33.442.
Blue	42 - 4010	2028	2	0.45	33.442	26.8539	26.8539	2017	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Blue	WA	2027	3	0.45	6.9	5.3682	5.3682	2017	Inferred Washington OFL provided in Appendix F (Table F2 pg 373) of the 2017 Blue and Deacon Rockfishes assessment. ABC=ACL
Blue	WA	2028	3	0.45	6.8	5.2904	5.2904	2017	
Brown	*N of 4010*	*2027*	*2*	*0.45*	2.11	1.65	1.65	*2013*	OFL from the 2019 harvest projection update of the 2013 assessment (Table 1 pg 3; Agenda Item H.6 Attachment 2 November 2019). ***Sigma is capped at 2.0 for buffer calculation - with P* = 0.45, buffer fraction multiplier = 0.778 (Agenda Item G.6.a Supplemental SSC Report 1 Sept 2025)***. The portion of the coastwide stock South (~98.8%) and North of 40`10 N lat. (~1.2%) based on the proportion of cumulative removals by area during 1916-2012.
Brown	*N of 4010*	*2028*	*2*	*0.45*	2.11	***1.64***	***1.64***	*2013*	
Calico	N of 4010	2027	3	0.45					
Calico	N of 4010	2028	3	0.45					
China	WA	2027	2	0.45	8.96	7.13	7.13	2015	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).
China	WA	2028	2	0.45	8.75	6.9	6.9	2015	
China	4010 - 4616	2027	2	0.45	19.3	15.35	15.35	2015	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).

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
China	4010 - 4616	2028	2	0.45	19.06	15.03	15.03	2015	
Copper	WA - OR	2027	2	0.45	18.27	15.3651	15.3651	2021	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).
Copper	WA - OR	2028	2	0.45	17.97	14.969	14.969	2021	
Copper	42 - 4010	2027	1	0.45	7.34	6.8	6.7	2023	OFL projected from the 2023 full assessment; stock defined as CA (S of 42), apportioned to complex (N 4010 = 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.
Copper	42 - 4010	2028	1	0.45	7.32	6.74	6.67	2023	
Gopher	N of 4010	2027	3	0.45				2011	
Gopher	N of 4010	2028	3	0.45				2011	
Grass	N of 4010	2027	3	0.45	0.6567	0.5109	0.5109	2011	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.

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Grass	N of 4010	2028	3	0.45	0.6567	0.5109	0.5109	2011	
Kelp	N of 4010	2027	3	0.45	0.0092	0.0072	0.0072	2011	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.
Kelp	N of 4010	2028	3	0.45	0.0092	0.0072	0.0072	2011	
Olive	N of 4010	2027	3	0.45	0.3152	0.2452	0.2452	2011	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.
Olive	N of 4010	2028	3	0.45	0.3152	0.2452	0.2452	2011	
Quillback	WA	2027	3	0.45	2.86	2.2251	2.2251	2021	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).
Quillback	WA	2028	3	0.45	2.86	2.2251	2.2251	2021	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Quillback	OR	2027	2	0.45	3.19	2.69	2.69	2021	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).
Quillback	OR	2028	2	0.45	3.21	2.6739	2.6739	2021	
Treefish	N of 4010	2027	3	0.45	0.2165	0.1684	0.1684	2011	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.
Treefish	N of 4010	2028	3	0.45	0.2165	0.1684	0.1684	2011	
Nearshore Rockfish South	*S of 4010*	*2027*							*Sum of harvest specification contributions of component stocks in the complex.*
Nearshore Rockfish South	*S of 4010*	*2028*							
Black and Yellow	S of 4010	2027	2	0.45				2019	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).
Black and Yellow	S of 4010	2028	2	0.45				2019	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Blue	4010 - 3427	2027	2	0.45	301.194	243.9671	243.9671	2017	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 4010 N lat. (see Appendix D of the 2017 Assessment, pg 361). S of 4010 N lat. 2027 OFL = 334.66 * 0.90 = 301.194; 2028 OFL = 334.42 * 0.90 = 300.978.
Blue	4010 - 3427	2028	2	0.45	300.978	241.6853	241.6853	2017	
Blue	S of 3427	2027	3	0.45	21.8	16.9604	16.9604	2017	Appendix G of the 2017 blue and deacon assessment describes calculation of the OFL proxy (pg 376).
Blue	S of 3427	2028	3	0.45	21.8	16.9604	16.9604	2017	
Brown	*S of 4010*	*2027*	*2*	*0.45*	*180.79*	*141.03*	*141.03*	*2013*	***O****FL from 2019 catch-only projections of the 2013 assessment (Table 1 pg 3; Agenda Item H.6 Attachment 2 November 2019).* ***Sigma is capped at 2.0 for buffer calculation - with P* = 0.45, buffer fraction multiplier = 0.778 (Agenda Item G.6.a Supplemental SSC Report 1 Sept 2025****). The portion of the coastwide stock South (~98.8%) and North of 4010 N lat. (~1.2%) based on the proportion of cumulative removals by area during 1916-2012.*
Brown	*S of 4010*	*2028*	*2*	*0.45*	*181.09*	***140.89***	***140.89***	*2013*	
Calico	S of 4010	2027	3	0.45					
Calico	S of 4010	2028	3	0.45					

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
China	S of 4010	2027	2	0.45	17.97	14.2862	14.2862	2015	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).
China	S of 4010	2028	2	0.45	18.3	14.4204	14.4204	2015	
Copper	S of 4010	2027	1	0.45	139.91	129.55	127.79	2023	OFL projected from the 2023 full assessment; stock defined as CA (S of 42), apportioned to complex (N 4010 = 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 4010. ACL values split by designated areas (S 3427 - 2027 = 20.1, 2028 = 22) (4010 to 3427 - 2027 = 107.7, 2028 = 107.1).
Copper	S of 4010	2028	1	0.45	141.63	130.58	129.11	2023	
Gopher	S of 4010	2027	2	0.45	158	130.508	130.508	2019	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).
Gopher	S of 4010	2028	2	0.45	156	127.608	127.608	2019	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Grass	S of 4010	2027	3	0.45	59.6267	46.3896	46.3896	2011	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.
Grass	S of 4010	2028	3	0.45	59.6267	46.3896	46.3896	2011	
Kelp	S of 4010	2027	3	0.45	27.6594	21.519	21.519	2011	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.
Kelp	S of 4010	2028	3	0.45	27.6594	21.519	21.519	2011	
Olive	S of 4010	2027	3	0.45	224.6426	174.7719	174.7719	2011	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.
Olive	S of 4010	2028	3	0.45	224.6426	174.7719	174.7719	2011	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Treefish	S of 4010	2027	3	0.45	13.2295	10.2926	10.2926	2011	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.
Treefish	S of 4010	2028	3	0.45	13.2295	10.2926	10.2926	2011	
Shelf Rockfish North	*N of 4010*	*2027*							*Sum of harvest specification contributions of component stocks in the complex.*
Shelf Rockfish North	*N of 4010*	*2028*							
Bocaccio	N of 4010	2027	3	0.45	284.0136	220.9626	220.9626	2011	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 4010' N. Lat.
Bocaccio	N of 4010	2028	3	0.45	284.0136	220.9626	220.9626	2011	
Bronzespotted	N of 4010	2027	3	0.45					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.
Bronzespotted	N of 4010	2028	3	0.45					

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Chameleon	N of 4010	2027	3	0.45					
Chameleon	N of 4010	2028	3	0.45					
Chilipepper	*N of 4010*	*2027*	*1*	*0.45*	***240.401***	***224.294***	***224.294***	*2025*	*OFL from the 2025 full assessment, P* = 0.45, pending Council adoption (Table 4;* ***Agenda Item G.6 Supp Attachment 2 Sept 2025****),* ***with M >0.15 varying buffer.*** *OFLs are apportioned to the North (7%) and South (93%) of 4010 N lat. based on average historical landings.* ***N of 4010 N lat. 2027 OFL = 3434.3 * 0.07 = 240.401; 2028 OFL = 3318.7 * 0.07 = 232.309; 2027 ABC = 3204.2 * 0.07 = 224.294; 2028 ABC = 3079.7 * 0.07 = 215.579***
Chilipepper	*N of 4010*	*2028*	*1*	*0.45*	***232.309***	***215.579***	***215.579***	*2025*	
Cowcod	*N of 4010*	*2027*	*3*	*0.45*	***0.576***	***0.4481***	***0.4481***	*2019*	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 Sept 2025)****.* OFLs are apportioned to the north of 4010 N lat. (3%) and 4010 - 3427 N lat. (97%) based on cumulative historical catch (Table F3 pg 179; 1916-2018).
Cowcod	*N of 4010*	*2028*	*3*	*0.45*	***0.576***	***0.4481***	***0.4481***	*2019*	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Flag	N of 4010	2027	3	0.45	0.0724	0.0563	0.0563	2011	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.
Flag	N of 4010	2028	3	0.45	0.0724	0.0563	0.0563	2011	
Freckled	N of 4010	2027	3	0.45					
Freckled	N of 4010	2028	3	0.45					
Greenblotched	N of 4010	2027	3	0.45	1.2774	0.9938	0.9938	2011	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.
Greenblotched	N of 4010	2028	3	0.45	1.2774	0.9938	0.9938	2011	
Greenspotted	*42 - 4010*	*2027*	*2*	*0.45*	***10.23***	***7.96***	***7.96***	*2011*	*The OFL is the SPR proxy MSY of 95.6 mt based on the 2011 assessment (northern and southern models), with a default ABC of 74.4 mt calculated using a category 3 sigma for both 2027 and 2028. Apportionment should be based on the same relative amounts as in 2026; 10.7% 42-4010, 37.5% 4010-3427, 51.9% S 3427 (**Agenda Item G.6.a Supplemental SSC Report 1 Sept 2025**).*

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Greenspotted	*42 - 4010*	*2028*	*2*	*0.45*	***10.23***	***7.96***	***7.96***	*2011*	
Greenspotted	WA - OR	2027	3	0.45	6.1	4.7458	4.7458	2011	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).
Greenspotted	WA - OR	2028	3	0.45	6.1	4.7458	4.7458	2011	
Greenstriped	N of 4010	2027	3	0.45	623.61	485.1686	485.1686	2009	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 4010 N lat. is based on the mean of the 2003-2008 swept area biomass estimates from the NMFS trawl survey.
Greenstriped	N of 4010	2028	3	0.45	623.61	485.1686	485.1686	2009	
Halfbanded	N of 4010	2027	3	0.45					
Halfbanded	N of 4010	2028	3	0.45					
Harlequin	N of 4010	2027	3	0.45					
Harlequin	N of 4010	2028	3	0.45					

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Honeycomb	N of 4010	2027	3	0.45					
Honeycomb	N of 4010	2028	3	0.45					
Mexican	N of 4010	2027	3	0.45					
Mexican	N of 4010	2028	3	0.45					
Pink	N of 4010	2027	3	0.45	0.0037	0.0029	0.0029	2011	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.
Pink	N of 4010	2028	3	0.45	0.0037	0.0029	0.0029	2011	
Pinkrose	N of 4010	2027	3	0.45					
Pinkrose	N of 4010	2028	3	0.45					
Puget Sound	N of 4010	2027	3	0.45					
Puget Sound	N of 4010	2028	3	0.45					
Pygmy	N of 4010	2027	3	0.45					

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Pygmy	N of 4010	2028	3	0.45					
Redstripe	N of 4010	2027	3	0.45	269.9106	209.9904	209.9904	2011	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.
Redstripe	N of 4010	2028	3	0.45	269.9106	209.9904	209.9904	2011	
Rosethorn	N of 4010	2027	3	0.45	12.8971	10.0339	10.0339	2011	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.
Rosethorn	N of 4010	2028	3	0.45	12.8971	10.0339	10.0339	2011	
Rosy	N of 4010	2027	3	0.45	3.034	2.3605	2.3605	2011	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.
Rosy	N of 4010	2028	3	0.45	3.034	2.3605	2.3605	2011	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Silvergray	N of 4010	2027	3	0.45	159.4204	124.0291	124.0291	2011	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.
Silvergray	N of 4010	2028	3	0.45	159.4204	124.0291	124.0291	2011	
Speckled	N of 4010	2027	3	0.45	0.1711	0.1331	0.1331	2011	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.
Speckled	N of 4010	2028	3	0.45	0.1711	0.1331	0.1331	2011	
Squarespot	42 - 4010	2027	2	0.45				2021	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 4010 N lat. and thus no apportionment of the overall OFL was made to this area.
Squarespot	42 - 4010	2028	2	0.45				2021	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Starry	N of 4010	2027	3	0.45	0.0037	0.0029	0.0029	2011	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.
Starry	N of 4010	2028	3	0.45	0.0037	0.0029	0.0029	2011	
Stripetail	N of 4010	2027	3	0.45	40.3954	31.4276	31.4276	2011	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.
Stripetail	N of 4010	2028	3	0.45	40.3954	31.4276	31.4276	2011	
Swordspine	N of 4010	2027	3	0.45	0.0001	0.0001	0.0001	2011	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.
Swordspine	N of 4010	2028	3	0.45	0.0001	0.0001	0.0001	2011	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Tiger	N of 4010	2027	3	0.45	0.9689	0.7538	0.7538	2011	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.
Tiger	N of 4010	2028	3	0.45	0.9689	0.7538	0.7538	2011	
Vermilion	42 - 4010	2027	1	0.45	7	6.1	6.1	2021	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.
Vermilion	42 - 4010	2028	1	0.45	6.9	6	6	2021	
Vermilion	*WA - OR*	*2027*			***13.13***	***11.99***	***11.99***	*2021*	*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 OFLs and ABCs for the stock definition (N of 42). For 2027 and 2028, the OFL values are 13.13 mt and 12.83 mt respectively, and the ABC values are 11.99 mt and 11.66 mt, respectively. P* = 0.45 (**Agenda Item G.6.a Supplemental SSC Report 1 Sept 2025**).*
Vermilion	*WA - OR*	*2028*			***12.83***	***11.66***	***11.66***	*2021*	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Shelf Rockfish South	*S of 4010*	*2027*							Sum of harvest specification contributions of component stocks in the complex.
Shelf Rockfish South	*S of 4010*	*2028*							
Bronzespotted	S of 4010	2027	3	0.45	3.6465	2.837	2.837	2011	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.
Bronzespotted	S of 4010	2028	3	0.45	3.6465	2.837	2.837	2011	
Chameleon	S of 4010	2027	3	0.45					
Chameleon	S of 4010	2028	3	0.45					
Flag	S of 4010	2027	3	0.45	23.4239	18.2238	18.2238	2011	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.
Flag	S of 4010	2028	3	0.45	23.4239	18.2238	18.2238	2011	
Freckled	S of 4010	2027	3	0.45					

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Freckled	S of 4010	2028	3	0.45					
Greenblotched	S of 4010	2027	3	0.45	23.1305	17.9955	17.9955	2011	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.
Greenblotched	S of 4010	2028	3	0.45	23.1305	17.9955	17.9955	2011	
Greenspotted	*4010 - 3427*	*2027*	*2*	*0.45*	***35.85***	***27.9***	***27.9***	*2011*	*The OFL is the SPR proxy MSY of 95.6 mt based on the 2011 assessment (northern and southern models), with a default ABC of 74.4 mt calculated using a category 3 sigma for both 2027 and 2028. Apportionment should be based on the same relative amounts as in 2026; 10.7% 42-4010, 37.5% 4010-3427, 51.9% S 3427 (**Agenda Item G.6.a Supplemental SSC Report 1 Sept 2025**).*
Greenspotted	*4010 - 3427*	*2028*	*2*	*0.45*	***35.85***	***27.9***	***27.9***	*2011*	
Greenspotted	*S of 3427*	*2027*	*2*	*0.45*	***49.62***	***38.60***	***38.60***	*2011*	*The OFL is the SPR proxy MSY of 95.6 mt based on the 2011 assessment (northern and southern models), with a default ABC of 74.4 mt calculated using a category 3 sigma for both 2027 and 2028. Apportionment should be based on the same relative amounts as in 2026; 10.7% 42-4010, 37.5% 4010-3427, 51.9% S 3427 (**Agenda Item G.6.a Supplemental SSC Report 1 Sept 2025**).*
Greenspotted	*S of 3427*	*2028*	*2*	*0.45*	***49.62***	***38.60***	***38.60***	*2011*	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Greenstriped	S of 4010	2027	3	0.45	114.39	88.9954	88.9954	2009	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 4010 N lat. is based on the mean of the 2003-2008 swept area biomass estimates from the NMFS trawl survey.
Greenstriped	S of 4010	2028	3	0.45	114.39	88.9954	88.9954	2009	
Halfbanded	S of 4010	2027	3	0.45					
Halfbanded	S of 4010	2028	3	0.45					
Harlequin	S of 4010	2027	3	0.45					
Harlequin	S of 4010	2028	3	0.45					
Honeycomb	S of 4010	2027	3	0.45	9.8668	7.6764	7.6764	2011	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.
Honeycomb	S of 4010	2028	3	0.45	9.8668	7.6764	7.6764	2011	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Mexican	S of 4010	2027	3	0.45	5.0532	3.9314	3.9314	2011	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.
Mexican	S of 4010	2028	3	0.45	5.0532	3.9314	3.9314	2011	
Pink	S of 4010	2027	3	0.45	2.5335	1.9711	1.9711	2011	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.
Pink	S of 4010	2028	3	0.45	2.5335	1.9711	1.9711	2011	
Pinkrose	S of 4010	2027	3	0.45					
Pinkrose	S of 4010	2028	3	0.45					
Pygmy	S of 4010	2027	3	0.45					
Pygmy	S of 4010	2028	3	0.45					

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Redstripe	S of 4010	2027	3	0.45	0.4926	0.3832	0.3832	2011	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.
Redstripe	S of 4010	2028	3	0.45	0.4926	0.3832	0.3832	2011	
Rosethorn	S of 4010	2027	3	0.45	2.1305	1.6575	1.6575	2011	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.
Rosethorn	S of 4010	2028	3	0.45	2.1305	1.6575	1.6575	2011	
Rosy	S of 4010	2027	3	0.45	44.5082	34.6274	34.6274	2011	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.
Rosy	S of 4010	2028	3	0.45	44.5082	34.6274	34.6274	2011	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Silvergray	S of 4010	2027	3	0.45	0.5376	0.4183	0.4183	2011	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.
Silvergray	S of 4010	2028	3	0.45	0.5376	0.4183	0.4183	2011	
Speckled	S of 4010	2027	3	0.45	39.3813	30.6387	30.6387	2011	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.
Speckled	S of 4010	2028	3	0.45	39.3813	30.6387	30.6387	2011	
Squarespot	S of 4010	2027	2	0.45	7.5732	6.3691	6.3215	2021	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.
Squarespot	S of 4010	2028	2	0.45	7.9485	6.6211	6.6211	2021	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Starry	S of 4010	2027	3	0.45	62.5716	48.6807	48.6807	2011	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.
Starry	S of 4010	2028	3	0.45	62.5716	48.6807	48.6807	2011	
Stripetail	S of 4010	2027	3	0.45	23.6233	18.3789	18.3789	2011	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.
Stripetail	S of 4010	2028	3	0.45	23.6233	18.3789	18.3789	2011	
Swordspine	S of 4010	2027	3	0.45	14.2159	11.06	11.06	2011	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.
Swordspine	S of 4010	2028	3	0.45	14.2159	11.06	11.06	2011	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Tiger	S of 4010	2027	3	0.45	0.0399	0.031	0.031	2011	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.
Tiger	S of 4010	2028	3	0.45	0.0399	0.031	0.031	2011	
Vermilion	S of 4010	2027			305.3	268	268	2021	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 4010 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.
Vermilion	S of 4010	2028			303.3	264.4	264.4	2021	
Yellowtail Rockfish	S of 4010	2027	3	0.45	1064.439	828.1337	828.1337	2011	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).
Yellowtail Rockfish	S of 4010	2028	3	0.45	1064.439	828.1337	828.1337	2011	
Slope Rockfish North	*N of 4010*	*2027*							*Sum of harvest specification contributions of component stocks in the complex.*

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Slope Rockfish North	*N of 4010*	*2028*							
Aurora	*N of 4010*	*2027*	*1*	*0.45*				*2013*	***A request for extended projections is recommended by the SSC to utilize for default harvest specifications for 2027-28.*** *The portion of the coastwide stock north (19%) and south (81%) of 4010 N lat. is based on average survey biomass.*
Aurora	*N of 4010*	*2028*	*1*	*0.45*				*2013*	
Bank	N of 4010	2027	3	0.45	17.2375	13.4108	13.4108	2011	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.
Bank	N of 4010	2028	3	0.45	17.2375	13.4108	13.4108	2011	
Blackgill Rockfish	N of 4010	2027	3	0.45	4.7	3.6566	3.6566	2011	Revisions to OFL Contributions for Category 3 Stocks (Dick 2011). Original NOAA Tech Memo NOAA-TM-NMFS-SWFSC-460 (Dick and MacCall 2010).
Blackgill Rockfish	N of 4010	2028	3	0.45	4.7	3.6566	3.6566	2011	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Redbanded	N of 4010	2027	3	0.45	45.2618	35.2137	35.2137	2011	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.
Redbanded	N of 4010	2028	3	0.45	45.2618	35.2137	35.2137	2011	
Rougheye/Blackspotted	*N of 4010*	*2027*	*2*	*0.45*	*946.68*	*827.3983*	*827.3983*	*2025*	*OFL based on the 2025 full assessment, P* = 0.45, pending Council adoption (Table ix pg xviii; **Agenda Item G.3 Attachment 4 Sept 2025**). The coastwide OFLs are apportioned north (98%) and south (2%) based on average landings during 1985-2012. N of 4010 2027 OFL = 966 * 0.98 = 946.68; 2028 OFL = 954 * 0.98 = 934.92.*
Rougheye/Blackspotted	*N of 4010*	*2028*	*2*	*0.45*	*934.92*	*808.7058*	*808.7058*	*2025*	
Sharpchin	*N of 4010*	*2027*	*2*	*0.45*	*276*	*215.28*	*215.28*	*2013*	*OFL from 2019 catch-only projections of the 2013 assessment (Table 15 pg 8; Agenda Item H.8 Supp Attachment 2 September 2019). **Sigma is capped at 2.0 for buffer calculation - with P* = 0.45, buffer fraction multiplier = 0.778 (Agenda Item G.6.a Supplemental SSC Report 1 Sept 2025**). OFLs are apportioned to the North (80%) and South (20%) of 4010 N lat. based on average swept area biomass estimates from the triennial survey. N of 4010 N lat. 2027 OFL = 345 * 0.8 = 276; 2028 OFL = 341 * 0.8 = 272.8.*
Sharpchin	*N of 4010*	*2028*	*2*	*0.45*	*272.8*	***212.24***	***212.24***	*2013*	

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Shortraker	N of 4010	2027	3	0.45	18.7038	14.5516	14.5516	2011	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.
Shortraker	N of 4010	2028	3	0.45	18.7038	14.5516	14.5516	2011	
Splitnose	*N of 4010*	*2027*	*1*	*0.45*	***448***	***349***	***349***	*2009*	*The OFL is the SPR proxy MSY of 1,244 mt based on the 2009 assessment (Table 23), with a default ABC of 968 mt calculated using a category 3 sigma. Status quo apportionment is 36% N of 4010 and 64% S of 4010. S of 4010 OFL 1244 * 0.36 = 447.84, ABC 968 * 0.36 = 348.48 (**Agenda Item G.6.a Supplemental SSC Report 1 Sept 2025**).*
Splitnose	*N of 4010*	*2028*	*1*	*0.45*	***448***	***349***	***349***	*2009*	
Yellowmouth	N of 4010	2027	3	0.45	192.4467	149.7235	149.7235	2011	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.
Yellowmouth	N of 4010	2028	3	0.45	192.4467	149.7235	149.7235	2011	
Slope Rockfish South	*S of 4010*	*2027*							*Sum of harvest specification contributions of component stocks in the complex.*

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Slope Rockfish South	*S of 4010*	*2028*							
Aurora	*S of 4010*	*2027*	*1*	*0.45*				*2013*	***A request for extended projections is recommended by the SSC to utilize for default harvest specifications for 2027-28.*** *The portion of the coastwide stock north (19%) and south (81%) of 4010 N lat. is based on average survey biomass.*
Aurora	*S of 4010*	*2028*	*1*	*0.45*				*2013*	
Bank	S of 4010	2027	3	0.45	503.215	391.5013	391.5013	2011	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.
Bank	S of 4010	2028	3	0.45	503.215	391.5013	391.5013	2011	
Blackgill Rockfish	S of 4010	2027	2	0.45	202	163.62	163.62	2017	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).
Blackgill Rockfish	S of 4010	2028	2	0.45	202	162.206	162.206	2017	
Pacific Ocean Perch	S of 4010	2027	3	0.45					

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Pacific Ocean Perch	S of 4010	2028	3	0.45					
Redbanded	S of 4010	2027	3	0.45	10.4057	8.0956	8.0956	2011	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.
Redbanded	S of 4010	2028	3	0.45	10.4057	8.0956	8.0956	2011	
Rougheye/Blackspotted	*S of 4010*	*2027*	*2*	*0.45*	*19.32*	*16.8857*	*16.8857*	*2025*	*OFL based on the 2025 full assessment, P* = 0.45, pending Council adoption (Table ix pg xviii; **Agenda Item G.3 Attachment 4 Sept 2025**). The coastwide OFLs are apportioned north (98%) and south (2%) based on average landings during 1985-2012. S of 4010 2027 OFL = 966 * 0.02 = 19.32; 2028 OFL = 954 * 0.02 = 19.08.*
Rougheye/Blackspotted	*S of 4010*	*2028*	*2*	*0.45*	*19.08*	*16.5042*	*16.5042*	*2025*	
Sharpchin	*S of 4010*	*2027*	*2*	*0.45*	69	*53.82*	*53.82*	*2013*	*OFL from 2019 catch-only projections of the 2013 assessment (Table 15 pg 8; Agenda Item H.8 Supp Attachment 2 September 2019). **Sigma is capped at 2.0 for buffer calculation - with P* = 0.45, buffer fraction multiplier = 0.778 (Agenda Item G.6.a Supplemental SSC Report 1 Sept 2025**). OFLs are apportioned to the North (80%) and South (20%) of 4010 N lat. based on average swept area biomass estimates from the triennial survey. S of 4010 N lat. 2027 OFL = 345 * 0.2 = 69; 2028 OFL = 341 * 0.2 = 68.2.*

Stock/Complex	Area	Year	Category	P*	OFL	ABC	ACL	Assess Year	Notes/Description
Sharpchin	*S of 4010*	*2028*	*2*	*0.45*	68.2	***53.06***	***53.06***	*2013*	
Shortraker	S of 4010	2027	3	0.45	0.1049	0.0816	0.0816	2011	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.
Shortraker	S of 4010	2028	3	0.45	0.1049	0.0816	0.0816	2011	
Yellowmouth	S of 4010	2027	3	0.45	0.8483	0.66	0.66	2011	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.
Yellowmouth	S of 4010	2028	3	0.45	0.8483	0.66	0.66	2011	