

**2023 AND 2024 GROUND FISH HARVEST SPECIFICATIONS UNDER DEFAULT
HARVEST CONTROL RULES**

The following tables were downloaded from the Pacific Fisheries Information Network (PacFIN) on September 10, 2021. These tables are available on the PacFIN web site under the APEX reporting system in report [GMT008](#). These tables were updated with corrections made since the briefing book deadline and are consistent with SSC recommendations on 2023 and 2024 groundfish harvest specifications.

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Table 1. 2023 harvest specifications (mt) and stock category designations for west coast groundfish stocks and stock complexes under default harvest control rules (specifications not yet available for highlighted stocks).

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Yelloweye Rockfish	CW	1 (Year Based)	0.40 (0.160)	123	103	66	2017	OFL projected using a 50% SPR harvest rate in the 2017 stock assessment. ACL projected using a 65% SPR harvest rate in the 2017 stock assessment. Sector-specific ACTs projected using a 70% SPR harvest rate in the 2017 stock assessment.
Arrowtooth Flounder	CW	2 (Year Based)	0.40 (0.294)	26391	18632	18632	2017	OFL projected using a 30% SPR from the 2017 update assessment.
Big Skate	CW	2 (Year Based)	0.45 (0.143)	1541	1320	1320	2019	OFL projected using a 50% SPR harvest rate in the 2019 big skate assessment.
Black Rockfish	WA	1 (Year Based)	0.45 (0.091)	319	290	290	2015	OFL projected using a 50% SPR from the 2019 catch-only projection update.
Black Rockfish	CA	1 (Year Based)	0.45 (0.091)	368	334	334	2015	OFL projected using a 50% SPR from the 2019 catch-only projection update.
Bocaccio	S of 4010	1 (Year Based)	0.45 (0.083)	2009	1842	1842	2017	OFL projected using a 50% SPR from the 2019 updated harvest specification projections based on new sigmas with a 7.4% reduction to subtract the portion of the assessed stock north of 40°10' N lat. ACL = ABC (P* = 0.45).
Cabazon	CA	1 (Year Based)	0.45 (0.074)	197	182	182	2019	OFL projected using a 45% SPR from the 2019 assessment.
Cabazon	3427 - 42	1 (Year Based)	0.45 (0.074)	175	162.05	162.05	2019	OFL projected using a 45% SPR from the 2019 assessment.
Cabazon	S of 3427	1 (Year Based)	0.45 (0.074)	21.7	20.094	20.094	2019	OFL projected using a 45% SPR from the 2019 assessment.
Cabazon/Kelp Greenling	WA			25	20	20	-	Sum of harvest specification contributions of component stocks in the complex.
Cabazon	WA	3 (Year Based)	0.45 (0.222)	18.3	14.237	14.237	2019	OFL based on a DB-SRA assessment in the 2019 assessment.
Kelp Greenling	WA	3 (Year Based)	0.45 (0.222)	7.1	5.524	5.524	2015	OFL based on a 2015 DB-SRA estimate using a low vulnerability prior.
Cabazon/Kelp Greenling	OR			202	185	185	-	Sum of harvest specification contributions of component stocks in the complex.
Cabazon	OR	1 (Year Based)	0.45 (0.074)	54.5	50.467	50.467	2019	OFL projected using a 45% SPR from the 2019 assessment.
Kelp Greenling	OR	1 (Year Based)	0.45 (0.091)	147.569	134.140	134.140	2015	2021 Updated Harvest Specification Projections for Oregon Kelp Greenling (Table 5 in Agenda Item C.8, Attachment 2) Based on New Sigmas.
California Scorpionfish	CW	CA Scorpionfi	0.45 (0.096)	290	262	262	2017	OFL projected using a 50% SPR from the 2017 assessment.

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
		sh (Year Based)						
Canary Rockfish	CW	1 (Year Based)	0.45 (0.091)	1413	1284	1284	2015	2019 Updated Harvest Specification Projections for Canary Rockfish (Table 2 in Agenda Item H.6, Attachment 2, November 2019).
Chilipepper	S of 4010	1 (Year Based)	0.45 (0.091)	2401	2183	2183	2015	OFLs are apportioned to the north (7%) and south (93%) of 40°10' N lat. based on average historical landings.
Cowcod	S of 4010			113	80	80	2019	Harvest specifications are the sum of assessed area projections (Conception area) and DBSRA estimates (Monterey area). Sector allocations are based on a precautionary ACT of 50 mt due to assessment uncertainty.
Cowcod	4010 - 3427	3 (Year Based)	0.40 (0.398)	18.9	11.378	11.378	2019	OFL is based on the 2019 DB-SRA estimate in Appendix B of the 2019 cowcod assessment.
Cowcod	S of 3427	2 (Year Based)	0.40 (0.267)	93.7818	68.742	68.742	2019	OFL is based on a 50% SPR harvest rate projected in the 2019 assessment. ABC based on time varying cat. 2 sigma, P* = 0.4.
Darkblotched Rockfish	CW	1 (Year Based)	0.45 (0.083)	856	785	785	2017	OFL projected using a 50% SPR in the 2019 catch-only projection update.
Dover Sole	CW	1 (Year Based)	0.45 (0.065)	63834	59685	50000	2021	OFL projected using a 30% SPR harvest rate in the 2021 full assessment . ACL = 50,000 mt.
English Sole	CW	2 (Year Based)	0.45 (0.190)	11133	9018	9018	2013	OFL projected using a 30% SPR harvest rate in the 2019 English Sole Updated Harvest Specification Projections. ACL = ABC (P* = 0.45).
Lingcod	N of 4010	2 (Year Based)	0.45 (0.126)	5010	4378	4378	2021	OFLs projected using a 45% SPR harvest rate in the 2021 full assessment of lingcod N of 40°10' N lat.
Lingcod	S of 4010	2 (Year Based)	0.45 (0.126)	846	739	739	2021	OFLs projected using a 45% SPR harvest rate in the 2021 full assessment of lingcod S of 40°10' N lat.
Longnose Skate	CW	2 (Year Based)	0.45 (0.143)	1993	1708	1708	2019	OFLs projected using a 45% SPR harvest rate in the 2019 assessment. ACL = ABC.
Longspine Thornyhead	CW	2 (Year Based)	0.40 (0.346)	4616	3019	-	2013	Coastwide OFL projected using a 50% SPR harvest rate in the 2019 catch-only projection update. 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.
Longspine Thornyhead	N of 3427	2 (Year Based)	0.40 (0.346)	-	-	2295	2013	Coastwide OFL projected using a 50% SPR harvest rate in the 2019 catch-only projection update. 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.
Longspine Thornyhead	S of 3427	2 (Year Based)	0.40 (0.346)	-	-	725	2013	Coastwide OFL projected using a 50% SPR harvest rate in the 2019 catch-only projection update. 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.

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Pacific Ocean Perch	N of 4010	2 (Year Based)	0.45 (0.159)	4248	3573	3573	2017	OFL projected using a 50% SPR harvest rate in the 2019 Pacific Ocean Perch Updated Harvest Specification Projections. ACL = ABC (P* = 0.45).
Petrale Sole	CW	1 (Year Based)	0.45 (0.074)	3763	3485	3485	2019	OFL projected using a 30% SPR harvest rate in the 2021 catch-only projection update. ACL = ABC (P* = 0.45). 30 mt allocation to non-trawl and the remainder to trawl. The allocation percentages shown in the Allocation Type are an artifact of the database; they are not used to allocate petrale sole.
Sablefish	CW	1 (Year Based)	0.45 (0.065)	11577	10825	-	2021	OFLs projected using a 45% SPR harvest rate in the 2021 update assessment. ACL = ABC (P* = 0.45). ACLs are based on an apportionment of the coastwide ABC with 78.4% to the N and 21.6% to the S of 36° N lat., determined using the average 2014-2018 annual swept area biomass estimates from the NMFS NWFSC trawl survey.
Sablefish	N of 36	1 (Year Based)	0.45 (0.065)	-	-	8486	2021	OFLs projected using a 45% SPR harvest rate in the 2021 update assessment. ACL = ABC (P* = 0.45). ACLs are based on an apportionment of the coastwide ABC with 78.4% to the N and 21.6% to the S of 36° N lat., determined using the average 2014-2018 annual swept area biomass estimates from the NMFS NWFSC trawl survey.
Sablefish	S of 36	1 (Year Based)	0.45 (0.074)	-	-	2338	2019	OFLs projected using a 45% SPR harvest rate in the 2021 update assessment. ACL = ABC (P* = 0.45). ACLs are based on an apportionment of the coastwide ABC with 78.4% to the N and 21.6% to the S of 36° N lat., determined using the average 2014-2018 annual swept area biomass estimates from the NMFS NWFSC trawl survey.
Shortspine Thornyhead	CW	2 (Year Based)	0.40 (0.346)	3177	2078	-	2013	Coastwide OFL projected using a 50% SPR harvest rate in the 2019 Catch-Only Projection Update. The coastwide ABC (P* = 0.4) is apportioned N (65.4%) and S (34.6%) of 34°27' N lat. based on 2003-2012 average swept area biomass in the NMFS NWFSC trawl survey to determine ACLs.
Shortspine Thornyhead	N of 3427	2 (Year Based)	0.40 (0.346)	-	-	1359	2013	Coastwide OFL projected using a 50% SPR harvest rate in the 2019 Catch-Only Projection Update. The coastwide ABC (P* = 0.4) is apportioned N (65.4%) and S (34.6%) of 34°27' N lat. based on 2003-2012 average swept area biomass in the NMFS NWFSC trawl survey to determine ACLs.
Shortspine Thornyhead	S of 3427	2 (Year Based)	0.40 (0.346)	-	-	719	2013	Coastwide OFL projected using a 50% SPR harvest rate in the 2019 Catch-Only Projection Update. The coastwide ABC (P* = 0.4) is apportioned N (65.4%) and S (34.6%) of 34°27' N lat. based on 2003-2012 average swept area biomass in the NMFS NWFSC trawl survey to determine ACLs.
Spiny Dogfish	CW	2 (Year Based)	0.40 (0.238)	-	-	-	2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment. ACL=ABC (P*=0.4).
Splitnose	S of 4010	1 (Year Based)	0.45 (0.117)	1803	1592	1592	2009	OFL projected using a 50% SPR harvest rate in the 2019 Updated Harvest Specification Projections. Coastwide OFL is apportioned N

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
								(35.8%) and S (64.2%) of 40°10' N lat. based on average historical (1916-2008) landings.
Widow Rockfish	CW	1 (Year Based)	0.45 (0.074)	13633	12624	12624	2019	OFL projected using a 50% SPR harvest rate in the 2019 update assessment. ACL = ABC (P* = 0.45). Non-trawls are allocated 400 mt and rest is allocated to trawl. The 91% and 9% allocations noted in the Allocation Type section is an artifact and is not used to allocate widow for the 2023-2024 biennial cycle.
Yellowtail Rockfish	N of 4010	1 (Year Based)	0.45 (0.083)	6178	5666	5666	2017	OFL projected using a 50% SPR harvest rate in the 2019 updated harvest specifications for yellowtail rockfish N. ACL = ABC (P* = 0.45).
Pacific Cod	CW	3 (Year Based)	0.40 (0.398)	3200	1926	1600	-	OFL is based on the highest historical catch (in 1985). ACL = 50% of the OFL.
Starry Flounder	CW	3 (Year Based)	0.40 (0.398)	652	392	392	2017	OFL based on the 2017 DB-SRA assessment of starry flounder.
Blue/Deacon/Black Rockfish	OR		0.45 (0.044)	670	555	555	-	Sum of harvest specification contributions of component stocks in the complex.
Black Rockfish	OR	2 (Year Based)	0.45 (0.174)	569.007	470	470	2015	OFL projected using a 50% SPR from the 2019 catch-only projection update.
Blue	OR	2 (Year Based)	0.45 (0.159)	100.593	84.599	84.599	2017	OFL projected using a 50% SPR from the 2021 updated harvest specification projections for blue and deacon rockfishes. HG = ABC/ACL for managing OR fisheries.
Nearshore Rockfish North	N of 4010			101	85	85	-	Sum of harvest specification contributions of component stocks in the complex.
Black and Yellow	N of 4010	3 (Year Based)	0.45 (0.222)	0.014	0.011	0.011	-	
Blue	42 - 4010	2 (Year Based)	0.45 (0.159)	33.6	28.258	28.258	2017	10% of the CA OFL is apportioned north of 40°10' N lat. (see Appendix D of the 2017 Assessment).
Blue	WA	3 (Year Based)	0.45 (0.222)	8.1	6.302	6.302	2017	OFL is based on a DBSRA assessment in the 2017 Blue and Deacon Rockfishes Assessment (Appendix F).
Brown	N of 4010	2 (Year Based)	0.45 (0.190)	2.08	1.685	1.685	2013	The portion of the coastwide stock north of 40' 10 N lat. based on the proportion of cumulative removals by area during 1916-2012 (1.2%).
Calico	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
China	WA	2 (Year Based)	0.45 (0.174)	10.07	8.318	8.318	2015	OFLs projected from the North Model in the 2015 assessment updated with 2019 catch-only projections.
China	4010 - 4616	2 (Year Based)	0.45 (0.174)	20.64	17.049	17.049	2015	OFLs projected from the Central Model in the 2015 assessment updated with 2019 catch-only projections.
Copper	WA	2 (Year Based)	0.45 (0.126)	2.15	1.879	1.879	2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment pf copper rockfish in WA.
Copper	OR	2 (Year Based)	0.45 (0.126)	17.98	15.715	15.715	2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment pf copper rockfish in OR.

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Copper	42 - 4010	2 (Year Based)	0.45 (0.126)				2021	OFL projected using a 50% SPR harvest rate MSY proxy from the 2021 assessment of copper rockfish in CA north of 34°27' N lat. Apportionment?
Gopher	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	2011	
Grass	N of 4010	3 (Year Based)	0.45 (0.222)	0.657	0.511	0.511	2011	
Kelp	N of 4010	3 (Year Based)	0.45 (0.222)	0.009	0.007	0.007	2011	
Olive	N of 4010	3 (Year Based)	0.45 (0.222)	0.315	0.245	0.245	2011	
Quillback	WA	3 (Year Based)	0.45 (0.222)	2.855	2.221	2.225	2021	OFL projected using a 50% SPR harvest rate MSY proxy from the 2021 assessment of quillback rockfish in WA.
Quillback	OR	2 (Year Based)	0.45 (0.126)	2.618	2.288	2.239	2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment of quillback rockfish in OR.
Quillback	42 - 4010	2 (Year Based)	0.45 (0.126)				2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment of quillback rockfish in CA. Apportionment?
Treefish	N of 4010	3 (Year Based)	0.45 (0.222)	0.2165	0.168	0.168	2011	
Nearshore Rockfish South	S of 4010			980	801	801	-	Sum of harvest specification contributions of component stocks in the complex.
Blue	4010 - 3427	2 (Year Based)	0.45 (0.159)	302.4	254.318	254.318	2017	90% of the CA OFL is apportioned south of 40°10' N lat. (see Appendix D of the 2017 Assessment).
Blue	S of 3427	3 (Year Based)	0.45 (0.222)	21.8	16.960	16.960	2017	
Brown	S of 4010	2 (Year Based)	0.45 (0.190)	178.2189	144.357	144.357	2013	The portion of the coastwide stock south of 40°10' N lat. based on the proportion of cumulative removals by area during 1916-2012 (98.8%).
Calico	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
China	S of 4010	2 (Year Based)	0.45 (0.174)	16.39	13.538	13.538	2015	OFLs projected from the South Model in the 2015 assessment updated with 2019 catch-only projections.
Copper	S of 3427	2 (Year Based)	0.45 (0.126)				2021	OFL projected using a 50% SPR harvest rate MSY proxy from the 2021 assessment of copper rockfish in CA south of 34°27' N lat.
Copper	4010 - 3427	2 (Year Based)	0.45 (0.126)				2021	OFL projected using a 50% SPR harvest rate MSY proxy from the 2021 assessment of copper rockfish in CA north of 34°27' N lat. Apportionment?
Gopher	S of 4010	2 (Year Based)	0.45 (0.143)	136	118.864	118.864	2019	
Grass	S of 4010	3 (Year Based)	0.45 (0.222)	59.627	46.390	46.390	2011	

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Kelp	S of 4010	3 (Year Based)	0.45 (0.222)	27.6594	21.519	21.519	2011	
Olive	S of 4010	3 (Year Based)	0.45 (0.222)	224.643	174.772	174.772	2011	
Quillback	S of 4010	2 (Year Based)	0.45 (0.126)				2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment of quillback rockfish in CA. Apportionment?
Treefish	S of 4010	3 (Year Based)	0.45 (0.222)	13.2295	10.293	10.293	2011	
Other Fish	CW			286	223	223	-	Sum of harvest specification contributions of component stocks in the complex.
Kelp Greenling	CA	3 (Year Based)	0.45 (0.222)	118.9	92.504	92.504	2011	
Leopard Shark	CW	3 (Year Based)	0.45 (0.222)	167.1	130.004	130.004	2011	
Other Flatfish	CW			7887	4862	4862	-	Sum of harvest specification contributions of component stocks in the complex.
Butter Sole	CW	3 (Year Based)	0.40 (0.398)	4.631	2.788	2.788	-	
Curlfin Sole	CW	3 (Year Based)	0.40 (0.398)	8.242	4.962	4.962	-	
Flathead Sole	CW	3 (Year Based)	0.40 (0.398)	35	21.07	21.07	-	
Pacific Sanddab	CW	3 (Year Based)	0.40 (0.398)	4801	2890.20	2890.20	2011	
Rex Sole	CW	2 (Year Based)	0.40 (0.346)	2197.89	1437.42	1437.42	2013	OFL projected using a 50% SPR harvest rate from the 2013 ExSSS assessment and updated with 2019 catch-only projections.
Rock Sole	CW	3 (Year Based)	0.40 (0.398)	66.7	40.153	40.153	2011	
Sand Sole	CW	3 (Year Based)	0.40 (0.398)	773.2	465.466	465.466	2011	
Pacific Whiting	CW			-	-	369400	2021	
Shelf Rockfish North	N of 4010			1607	1276	1276	-	Sum of harvest specification contributions of component stocks in the complex.
Bocaccio	N of 4010	3 (Year Based)	0.45 (0.222)	284	220.952	220.952	2011	
Bronzespotted	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Chameleon	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Chilipepper	N of 4010	1 (Year Based)	0.45 (0.091)	180.74	164.293	164.293	2015	OFLs are apportioned to the north (7%) and south (93%) of 40°10' N lat. based on average historical landings.

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Cowcod	N of 4010	3 (Year Based)	0.45 (0.222)	0.567	0.441	0.441	2019	
Flag	N of 4010	3 (Year Based)	0.45 (0.222)	0.1	0.078	0.078	2011	
Freckled	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Greenblotched	N of 4010	3 (Year Based)	0.45 (0.222)	1.3	1.011	1.011	2011	
Greenspotted	42 - 4010	2 (Year Based)	0.45 (0.205)	9.389	7.464	7.464	2011	OFLs are projected using a 50% SPR harvest rate from the northern California model and updated in 2021. The portion of the assessed area north of 40°10' N lat. (22.2% of OFL from northern California model) based on average historical catch.
Greenspotted	WA - OR	3 (Year Based)	0.45 (0.222)	6.1	4.746	4.746	2011	
Greenstriped	N of 4010	3 (Year Based)	0.45 (0.222)	623.61	485.169	485.169	2009	OFL based on the MSY associated with the F_{MSY} proxy in the 2009 assessment. The portion of the coastwide stock north of 40°10' N lat. (84.5%) is based on the mean of the 2003-2008 swept area biomass estimates from the NMFS trawl survey.
Halfbanded	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Harlequin	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Honeycomb	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Mexican	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Pink	N of 4010	3 (Year Based)	0.45 (0.222)	0.004	0.003	0.003	2011	
Pinkrose	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Puget Sound	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Pygmy	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Redstripe	N of 4010	3 (Year Based)	0.45 (0.222)	269.9	209.982	209.982	2011	
Rosethorn	N of 4010	3 (Year Based)	0.45 (0.222)	12.9	10.0362	10.0362	2011	
Rosy	N of 4010	3 (Year Based)	0.45 (0.222)	3	2.334	2.334	2011	

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Silvergray	N of 4010	3 (Year Based)	0.45 (0.222)	159.4	124.013	124.013	2011	
Speckled	N of 4010	3 (Year Based)	0.45 (0.222)	0.2	0.156	0.156	2011	
Squarespot	42 - 4010	3 (Year Based)	0.45 (0.222)				2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment of squarespot in CA. Apportionment?
Starry	N of 4010	3 (Year Based)	0.45 (0.222)	0.0037	0.003	0.003	2011	
Stripetail	N of 4010	3 (Year Based)	0.45 (0.222)	40.4	31.431	31.431	2011	
Swordspine	N of 4010	3 (Year Based)	0.45 (0.222)	0.0001	0.0001	0.0001	2011	
Tiger	N of 4010	3 (Year Based)	0.45 (0.222)	1	0.778	0.778	2011	
Vermilion	WA	2 (Year Based)	0.45 (0.126)	0.7	0.612	0.612	2021	OFL projected from the 2021 assessment of vermilion rockfish in WA.
Vermilion	42 - 4010	1 (Year Based)	0.45 (0.065)	-	-	-	2021	OFL projected from the 2021 assessment of vermilion rockfish in CA. The OFLs N (4.4%) and S (95.6%) of 40°10' N lat. are based on an apportionment of the estimated biomass in CA N of 34°27' N lat.
Vermilion	OR	1 (Year Based)	0.45 (0.065)	13.41	12.538	12.538	2021	OFL projected from the 2021 assessment of vermilion rockfish in OR.
Shelf Rockfish South	S of 4010			1851	1483	1483	-	Sum of harvest specification contributions of component stocks in the complex.
Bronzespotted	S of 4010	3 (Year Based)	0.45 (0.222)	3.6	2.801	2.801	2011	
Chameleon	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Flag	S of 4010	3 (Year Based)	0.45 (0.222)	23.4	18.205	18.205	2011	
Freckled	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Greenblotched	S of 4010	3 (Year Based)	0.45 (0.222)	23.1	17.972	17.972	2011	
Greenspotted	4010 - 3427	2 (Year Based)	0.45 (0.205)	32.9024	26.157	26.157	2011	OFLs are projected using a 50% SPR harvest rate from the northern California model and updated in 2021. The portion of the assessed area north of 40°10' N lat. (22.2% of OFL from northern California model) based on average historical catch.
Greenspotted	S of 3427	2 (Year Based)	0.45 (0.205)	45.68	36.316	36.316	2011	OFLs are projected using a 50% SPR harvest rate from the southern California model and updated in 2021.
Greenstriped	S of 4010	3 (Year Based)	0.45 (0.222)	114.39	88.995	88.995	2009	OFL based on the MSY associated with the FMSY proxy in the 2009 assessment. The portion of the coastwide stock south of 40°10' N lat.

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
								(15.5%) is based on the mean of the 2003-2008 swept area biomass estimates from the NMFS trawl survey.
Halfbanded	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Harlequin	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Honeycomb	S of 4010	3 (Year Based)	0.45 (0.222)	9.9	7.702	7.702	2011	
Mexican	S of 4010	3 (Year Based)	0.45 (0.222)	5.1	3.968	3.968	2011	
Pink	S of 4010	3 (Year Based)	0.45 (0.222)	2.5	1.945	1.945	2011	
Pinkrose	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Pygmy	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Redstripe	S of 4010	3 (Year Based)	0.45 (0.222)	0.5	0.389	0.389	2011	
Rosethorn	S of 4010	3 (Year Based)	0.45 (0.222)	2.1	1.634	1.634	2011	
Rosy	S of 4010	3 (Year Based)	0.45 (0.222)	44.5	34.621	34.621	2011	
Silvergray	S of 4010	3 (Year Based)	0.45 (0.222)	0.5	0.389	0.389	2011	
Speckled	S of 4010	3 (Year Based)	0.45 (0.222)	39.4	30.653	30.653	2011	
Squarespot	S of 4010	2 (Year Based)	0.45 (0.222)				2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment of squarespot in CA. Apportionment?
Starry	S of 4010	3 (Year Based)	0.45 (0.222)	62.6	48.703	48.703	2011	
Stripetail	S of 4010	3 (Year Based)	0.45 (0.222)	23.6	18.361	18.361	2011	
Swordspine	S of 4010	3 (Year Based)	0.45 (0.222)	14.2	11.048	11.048	2011	
Tiger	S of 4010	3 (Year Based)	0.45 (0.222)	0.04	0.031	0.031	2011	
Vermilion	4010 - 3427	1 (Year Based)	0.45 (0.065)	161.401	150.91	150.91	2021	OFL projected from the 2021 assessment of vermilion and sunset rockfishes in CA N of 34°27' N lat. The OFLs N (4.4%) and S (95.6%) of 40°10' N lat. are based on an apportionment of the estimated biomass in CA N of 34°27' N lat. The assessment is of vermilion and sunset rockfishes in combination.

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Vermilion	S of 3427	2 (Year Based)	0.45 (0.126)	166.36	145.399	145.399	2021	OFL projected from the 2021 assessment of vermilion and sunset rockfishes in CA S of 34°27' N lat. The assessment is of vermilion and sunset rockfishes in combination.
Yellowtail Rockfish	S of 4010	3 (Year Based)	0.45 (0.222)	1064.4	828.103	828.103	2011	
Slope Rockfish North	N of 4010			1819	1540	1540	-	Sum of harvest specification contributions of component stocks in the complex.
Aurora	N of 4010	1 (Year Based)	0.45 (0.100)	17.4078	15.667	15.667	2013	The portion of the coastwide stock north of 40°10' N lat. (19%) is based on average survey biomass.
Bank	N of 4010	3 (Year Based)	0.45 (0.222)	17.2	13.382	13.382	2011	
Blackgill Rockfish	N of 4010	3 (Year Based)	0.45 (0.222)	4.7	3.657	3.657	2011	
Redbanded	N of 4010	3 (Year Based)	0.45 (0.222)	45.3	35.243	35.243	2011	
Rougheye/Blackspotted	N of 4010	2 (Year Based)	0.45 (0.190)	233.24	188.924	188.924	2013	The coastwide OFLs are apportioned north (98%) and south (2%) based on average landings during 1985-2012.
Sharpchin	N of 4010	2 (Year Based)	0.45 (0.190)	285.288	231.083	231.083	2013	OFLs are apportioned north and south of 40°10' N lat. (80% N, 20% S) based on average swept area biomass estimates from the triennial survey.
Shortraker	N of 4010	3 (Year Based)	0.45 (0.222)	18.7	14.549	14.549	2011	
Splitnose	N of 4010	1 (Year Based)	0.45 (0.117)	1005.264	887.648	887.648	2009	OFL projected using a 50% SPR harvest rate in the 2019 Updated Harvest Specification Projections. Coastwide OFL is apportioned N (35.8%) and S (64.2%) of 40°10' N lat. based on average historical (1916-2008) landings.
Yellowmouth	N of 4010	3 (Year Based)	0.45 (0.222)	192.4	149.687	149.687	2011	
Slope Rockfish South	S of 4010			870	701	701	-	Sum of harvest specification contributions of component stocks in the complex.
Aurora	S of 4010	1 (Year Based)	0.45 (0.100)	74.212	66.791	66.791	2013	The portion of the coastwide stock north of 40°10' N lat. (19%) is based on average survey biomass.
Bank	S of 4010	3 (Year Based)	0.45 (0.222)	503.2	391.49	391.49	2011	
Blackgill Rockfish	S of 4010	2 (Year Based)	0.45 (0.159)	205	172.405	172.405	2017	
Pacific Ocean Perch	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Redbanded	S of 4010	3 (Year Based)	0.45 (0.222)	10.4	8.091	8.091	2011	

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Rougheye/Blackspotted	S of 4010	2 (Year Based)	0.45 (0.190)	4.76	3.856	3.856	2013	The coastwide OFLs are apportioned north (98%) and south (2%) based on average landings during 1985-2012.
Sharpchin	S of 4010	2 (Year Based)	0.45 (0.190)	71.322	57.771	57.771	2013	OFLs are apportioned north and south of 40°10' N lat. (80% N, 20% S) based on average swept area biomass estimates from the triennial survey.
Shortraker	S of 4010	3 (Year Based)	0.45 (0.222)	0.1	0.078	0.078	2011	
Yellowmouth	S of 4010	3 (Year Based)	0.45 (0.222)	0.8	0.622	0.622	2011	

Table 2. 2024 harvest specifications (mt) and stock category designations for west coast groundfish stocks and stock complexes under default harvest control rules (specifications not yet available for highlighted stocks).

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Yelloweye Rockfish	CW	1 (Year Based)	0.40 (0.168)	123	103	66	2017	OFL projected using a 50% SPR harvest rate in the 2017 stock assessment. ACL projected using a 65% SPR harvest rate in the 2017 stock assessment. Sector-specific ACTs projected using a 70% SPR harvest rate in the 2017 stock assessment.
Arrowtooth Flounder	CW	2 (Year Based)	0.40 (0.307)	20459	14178	14178	2017	OFL projected using a 30% SPR from the 2017 update assessment.
Big Skate	CW	2 (Year Based)	0.45 (0.151)	1492	1267	1267	2019	OFL projected using a 50% SPR harvest rate in the 2019 big skate assessment.
Black Rockfish	WA	1 (Year Based)	0.45 (0.096)	319	289	289	2015	OFL projected using a 50% SPR from the 2019 catch-only projection update.
Black Rockfish	CA	1 (Year Based)	0.45 (0.096)	364	329	329	2015	OFL projected using a 50% SPR from the 2019 catch-only projection update.
Bocaccio	S of 4010	1 (Year Based)	0.45 (0.087)	2002	1828	1828	2017	OFL projected using a 50% SPR from the 2019 updated harvest specification projections based on new sigmas with a 7.4% reduction to subtract the portion of the assessed stock north of 40°10' N lat. ACL = ABC (P* = 0.45).
Cabazon	CA	1 (Year Based)	0.45 (0.078)	185	171	171	2019	OFL projected using a 45% SPR from the 2019 assessment.
Cabazon	3427 - 42	1 (Year Based)	0.45 (0.078)	164.3	151.485	151.485	2019	OFL projected using a 45% SPR from the 2019 assessment.

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Cabezon	S of 3427	1 (Year Based)	0.45 (0.078)	21	19.362	19.362	2019	OFL projected using a 45% SPR from the 2019 assessment.
Cabezon/Kelp Greenling	WA			22	17	17	-	Sum of harvest specification contributions of component stocks in the complex.
Cabezon	WA	3 (Year Based)	0.45 (0.222)	14.9	11.592	11.592	2019	OFL based on a DB-SRA assessment in the 2019 assessment.
Kelp Greenling	WA	3 (Year Based)	0.45 (0.222)	7.1	5.524	5.524	2015	OFL based on a 2015 DB-SRA estimate using a low vulnerability prior.
Cabezon/Kelp Greenling	OR			198	180	180	-	Sum of harvest specification contributions of component stocks in the complex.
Cabezon	OR	1 (Year Based)	0.45 (0.078)	53.4	49.235	49.235	2019	OFL projected using a 45% SPR from the 2019 assessment.
Kelp Greenling	OR	1 (Year Based)	0.45 (0.096)	144.899	130.989	130.989	2015	2021 Updated Harvest Specification Projections for Oregon Kelp Greenling (Table 5 in Agenda Item C.8, Attachment 2) Based on New Sigmas.
California Scorpionfish	CW	CA Scorpionfish (Year Based)	0.45 (0.101)	280	252	252	2017	OFL projected using a 50% SPR from the 2017 assessment.
Canary Rockfish	CW	1 (Year Based)	0.45 (0.096)	1401	1267	1267	2015	2019 Updated Harvest Specification Projections for Canary Rockfish (Table 2 in Agenda Item H.6, Attachment 2, November 2019).
Chilipepper	S of 4010	1 (Year Based)	0.45 (0.096)	2346	2121	2121	2015	OFLs are apportioned to the north (7%) and south (93%) of 40°10' N lat. based on average historical landings.
Cowcod	S of 4010			112	79	79	2019	Harvest specifications are the sum of assessed area projections (Conception area) and DBSRA estimates (Monterey area). Sector allocations are based on a precautionary ACT of 50 mt due to assessment uncertainty.
Cowcod	4010 - 3427	3 (Year Based)	0.40 (0.398)	19.2	11.558	11.558	2019	OFL is based on the 2019 DB-SRA estimate in Appendix B of the 2019 cowcod assessment.
Cowcod	S of 3427	2 (Year Based)	0.40 (0.281)	93.2651	67.058	67.058	2019	OFL is based on a 50% SPR harvest rate projected in the 2019 assessment. ABC based on time varying cat. 2 sigma, P* = 0.4.
Darkblotched Rockfish	CW	1 (Year Based)	0.45 (0.087)	822	750	750	2017	OFL projected using a 50% SPR in the 2019 catch-only projection update.
Dover Sole	CW	1 (Year Based)	0.45 (0.070)	55859	51949	50000	2021	OFL projected using a 30% SPR harvest rate in the 2021 full assessment . ACL = 50,000 mt.
English Sole	CW	2 (Year Based)	0.45 (0.197)	11158	8960	8960	2013	OFL projected using a 30% SPR harvest rate in the 2019 English Sole Updated Harvest Specification Projections. ACL = ABC (P* = 0.45).
Lingcod	N of 4010	2 (Year Based)	0.45 (0.135)	4455	3854	3854	2021	OFLs projected using a 45% SPR harvest rate in the 2021 full assessment of lingcod N of 40°10' N lat.
Lingcod	S of 4010	2 (Year Based)	0.45 (0.135)	855	740	740	2021	OFLs projected using a 45% SPR harvest rate in the 2021 full assessment of lingcod S of 40°10' N lat.

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Longnose Skate	CW	2 (Year Based)	0.45 (0.151)	1955	1660	1660	2019	OFLs projected using a 45% SPR harvest rate in the 2019 assessment. ACL = ABC.
Longspine Thornyhead	CW	2 (Year Based)	0.40 (0.358)	4433	2846	-	2013	Coastwide OFL projected using a 50% SPR harvest rate in the 2019 catch-only projection update. 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.
Longspine Thornyhead	N of 3427	2 (Year Based)	0.40 (0.358)	-	-	2162	2013	Coastwide OFL projected using a 50% SPR harvest rate in the 2019 catch-only projection update. 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.
Longspine Thornyhead	S of 3427	2 (Year Based)	0.40 (0.358)	-	-	683	2013	Coastwide OFL projected using a 50% SPR harvest rate in the 2019 catch-only projection update. 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.
Pacific Ocean Perch	N of 4010	2 (Year Based)	0.45 (0.167)	4133	3443	3443	2017	OFL projected using a 50% SPR harvest rate in the 2019 Pacific Ocean Perch Updated Harvest Specification Projections. ACL = ABC (P* = 0.45).
Petrale Sole	CW	1 (Year Based)	0.45 (0.078)	3563	3285	3285	2019	OFL projected using a 30% SPR harvest rate in the 2021 catch-only projection update. ACL = ABC (P* = 0.45). 30 mt allocation to non-trawl and the remainder to trawl. The allocation percentages shown in the Allocation Type are an artifact of the database; they are not used to allocate petrale sole.
Sablefish	CW	1 (Year Based)	0.45 (0.070)	10670	9923	-	2021	OFLs projected using a 45% SPR harvest rate in the 2021 update assessment. ACL = ABC (P* = 0.45). ACLs are based on an apportionment of the coastwide ABC with 78.4% to the N and 21.6% to the S of 36° N lat., determined using the average 2014-2018 annual swept area biomass estimates from the NMFS NWFSC trawl survey.
Sablefish	N of 36	1 (Year Based)	0.45 (0.070)	-	-	7780	2021	OFLs projected using a 45% SPR harvest rate in the 2021 update assessment. ACL = ABC (P* = 0.45). ACLs are based on an apportionment of the coastwide ABC with 78.4% to the N and 21.6% to the S of 36° N lat., determined using the average 2014-2018 annual swept area biomass estimates from the NMFS NWFSC trawl survey.
Sablefish	S of 36	1 (Year Based)	0.45 (0.078)	-	-	2143	2019	OFLs projected using a 45% SPR harvest rate in the 2021 update assessment. ACL = ABC (P* = 0.45). ACLs are based on an apportionment of the coastwide ABC with 78.4% to the N and 21.6% to the S of 36° N lat., determined using the average 2014-2018 annual swept area biomass estimates from the NMFS NWFSC trawl survey.
Shortspine Thornyhead	CW	2 (Year Based)	0.40 (0.358)	3162	2030	-	2013	Coastwide OFL projected using a 50% SPR harvest rate in the 2019 Catch-Only Projection Update. The coastwide ABC (P* = 0.4) is

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
								apportioned N (65.4%) and S (34.6%) of 34°27' N lat. based on 2003-2012 average swept area biomass in the NMFS NWFSC trawl survey to determine ACLs.
Shortspine Thornyhead	N of 3427	2 (Year Based)	0.40 (0.358)	-	-	1328	2013	Coastwide OFL projected using a 50% SPR harvest rate in the 2019 Catch-Only Projection Update. The coastwide ABC (P* = 0.4) is apportioned N (65.4%) and S (34.6%) of 34°27' N lat. based on 2003-2012 average swept area biomass in the NMFS NWFSC trawl survey to determine ACLs.
Shortspine Thornyhead	S of 3427	2 (Year Based)	0.40 (0.358)	-	-	702	2013	Coastwide OFL projected using a 50% SPR harvest rate in the 2019 Catch-Only Projection Update. The coastwide ABC (P* = 0.4) is apportioned N (65.4%) and S (34.6%) of 34°27' N lat. based on 2003-2012 average swept area biomass in the NMFS NWFSC trawl survey to determine ACLs.
Spiny Dogfish	CW	2 (Year Based)	0.40 (0.238)	-	-	-	2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment. ACL=ABC (P*=0.4).
Splitnose	S of 4010	1 (Year Based)	0.45 (0.121)	1766	1553	1553	2009	OFL projected using a 50% SPR harvest rate in the 2019 Updated Harvest Specification Projections. Coastwide OFL is apportioned N (35.8%) and S (64.2%) of 40°10' N lat. based on average historical (1916-2008) landings.
Widow Rockfish	CW	1 (Year Based)	0.45 (0.078)	12453	11482	11482	2019	OFL projected using a 50% SPR harvest rate in the 2019 update assessment. ACL = ABC (P* = 0.45). Non-trawls are allocated 400 mt and rest is allocated to trawl. The 91% and 9% allocations noted in the Allocation Type section is an artifact and is not used to allocate widow for the 2023-2024 biennial cycle.
Yellowtail Rockfish	N of 4010	1 (Year Based)	0.45 (0.087)	6090	5560	5560	2017	OFL projected using a 50% SPR harvest rate in the 2019 updated harvest specifications for yellowtail rockfish N. ACL = ABC (P* = 0.45).
Pacific Cod	CW	3 (Year Based)	0.40 (0.398)	3200	1926	1600	-	OFL is based on the highest historical catch (in 1985). ACL = 50% of the OFL.
Starry Flounder	CW	3 (Year Based)	0.40 (0.398)	652	392	392	2017	OFL based on the 2017 DB-SRA assessment of starry flounder.
Blue/Deacon/Black Rockfish	OR		0.45 (0.044)	668	548	548	-	Sum of harvest specification contributions of component stocks in the complex.
Black Rockfish	OR	2 (Year Based)	0.45 (0.182)	569.157	465.570	465.570	2015	OFL projected using a 50% SPR from the 2019 catch-only projection update.
Blue	OR	2 (Year Based)	0.45 (0.167)	98.362	81.936	81.936	2017	OFL projected using a 50% SPR from the 2021 updated harvest specification projections for blue and deacon rockfishes. HG = ABC/ACL for managing OR fisheries.
Nearshore Rockfish North	N of 4010			100	83	83	-	Sum of harvest specification contributions of component stocks in the complex.
Black and Yellow	N of 4010	3 (Year Based)	0.45 (0.222)	0.014	0.011	0.011	-	

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Blue	42 - 4010	2 (Year Based)	0.45 (0.167)	33.6	28.526	28.526	2017	10% of the CA OFL is apportioned north of 40°10' N lat. (see Appendix D of the 2017 Assessment).
Blue	WA	3 (Year Based)	0.45 (0.222)	7.8	6.068	6.068	2017	OFL is based on a DBSRA assessment in the 2017 Blue and Deacon Rockfishes Assessment (Appendix F).
Brown	N of 4010	2 (Year Based)	0.45 (0.197)	2.09	1.678	1.705	2013	The portion of the coastwide stock north of 40°10' N lat. based on the proportion of cumulative removals by area during 1916-2012 (1.2%).
Calico	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
China	WA	2 (Year Based)	0.45 (0.182)	9.75	7.976	7.976	2015	OFLs projected from the North Model in the 2015 assessment updated with 2019 catch-only projections.
China	4010 - 4616	2 (Year Based)	0.45 (0.182)	20.25	16.565	16.565	2015	OFLs projected from the Central Model in the 2015 assessment updated with 2019 catch-only projections.
Copper	WA	2 (Year Based)	0.45 (0.135)	2.18	1.886	1.886	2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment of copper rockfish in WA.
Copper	OR	2 (Year Based)	0.45 (0.135)	17.38	15.034	15.034	2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment of copper rockfish in OR.
Copper	42 - 4010	2 (Year Based)	0.45 (0.126)				2021	OFL projected using a 50% SPR harvest rate MSY proxy from the 2021 assessment of copper rockfish in CA north of 34°27' N lat. Apportionment?
Gopher	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	2011	
Grass	N of 4010	3 (Year Based)	0.45 (0.222)	0.657	0.511	0.511	2011	
Kelp	N of 4010	3 (Year Based)	0.45 (0.222)	0.009	0.007	0.007	2011	
Olive	N of 4010	3 (Year Based)	0.45 (0.222)	0.315	0.245	0.245	2011	
Quillback	WA	3 (Year Based)	0.45 (0.222)	2.86	2.225	2.225	2021	OFL projected using a 50% SPR harvest rate MSY proxy from the 2021 assessment of quillback rockfish in WA.
Quillback	OR	2 (Year Based)	0.45 (0.135)	2.656	2.297	2.260	2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment of quillback rockfish in OR.
Quillback	42 - 4010	2 (Year Based)	0.45 (0.126)				2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment of quillback rockfish in CA. Apportionment?
Treefish	N of 4010	3 (Year Based)	0.45 (0.222)	0.217	0.168	0.168	2011	
Nearshore Rockfish South	S of 4010			982	803	803	-	Sum of harvest specification contributions of component stocks in the complex.
Blue	4010 - 3427	2 (Year Based)	0.45 (0.167)	302.4	256.738	256.738	2017	90% of the CA OFL is apportioned south of 40°10' N lat. (see Appendix D of the 2017 Assessment).
Blue	S of 3427	3 (Year Based)	0.45 (0.222)	21.8	16.960	16.960	2017	

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Brown	S of 4010	2 (Year Based)	0.45 (0.197)	179.109	143.824	143.824	2013	The portion of the coastwide stock south of 40°10' N lat. based on the proportion of cumulative removals by area during 1916-2012 (98.8%).
Calico	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
China	S of 4010	2 (Year Based)	0.45 (0.182)	16.82	13.759	13.759	2015	OFLs projected from the South Model in the 2015 assessment updated with 2019 catch-only projections.
Copper	S of 3427	2 (Year Based)	0.45 (0.126)				2021	OFL projected using a 50% SPR harvest rate MSY proxy from the 2021 assessment of copper rockfish in CA south of 34°27' N lat.
Copper	4010 - 3427	2 (Year Based)	0.45 (0.126)				2021	OFL projected using a 50% SPR harvest rate MSY proxy from the 2021 assessment of copper rockfish in CA north of 34°27' N lat. Apportionment?
Gopher	S of 4010	2 (Year Based)	0.45 (0.151)	137	118.505	118.505	2019	
Grass	S of 4010	3 (Year Based)	0.45 (0.222)	59.627	46.39	46.39	2011	
Kelp	S of 4010	3 (Year Based)	0.45 (0.222)	27.659	21.519	21.519	2011	
Olive	S of 4010	3 (Year Based)	0.45 (0.222)	224.643	174.772	174.772	2011	
Quillback	S of 4010	2 (Year Based)	0.45 (0.126)				2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment of quillback rockfish in CA. Apportionment?
Treefish	S of 4010	3 (Year Based)	0.45 (0.222)	13.23	10.293	10.293	2011	
Other Fish	CW			286	223	223	-	Sum of harvest specification contributions of component stocks in the complex.
Kelp Greenling	CA	3 (Year Based)	0.45 (0.222)	118.9	92.504	92.504	2011	
Leopard Shark	CW	3 (Year Based)	0.45 (0.222)	167.1	130	130	2011	
Other Flatfish	CW			7946	4874	4874	-	Sum of harvest specification contributions of component stocks in the complex.
Butter Sole	CW	3 (Year Based)	0.40 (0.398)	4.631	2.788	2.788	-	
Curlfin Sole	CW	3 (Year Based)	0.40 (0.398)	8.242	4.962	4.962	-	
Flathead Sole	CW	3 (Year Based)	0.40 (0.398)	35	21.07	21.07	-	
Pacific Sanddab	CW	3 (Year Based)	0.40 (0.398)	4801	2890.20	2890.20	2011	
Rex Sole	CW	2 (Year Based)	0.40 (0.358)	2257.36	1449.23	1449.23	2013	OFL projected using a 50% SPR harvest rate from the 2013 ExSSS assessment and updated with 2019 catch-only projections.

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Rock Sole	CW	3 (Year Based)	0.40 (0.398)	66.7	40.153	40.153	2011	
Sand Sole	CW	3 (Year Based)	0.40 (0.398)	773.2	465.466	465.466	2011	
Pacific Whiting	CW			-	-	-	2021	
Shelf Rockfish North	N of 4010			1603	1271	1271	-	Sum of harvest specification contributions of component stocks in the complex.
Bocaccio	N of 4010	3 (Year Based)	0.45 (0.222)	284.014	220.963	220.963	2011	
Bronzespotted	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Chameleon	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Chilipepper	N of 4010	1 (Year Based)	0.45 (0.096)	176.61	159.655	159.654	2015	OFLs are apportioned to the north (7%) and south (93%) of 40°10' N lat. based on average historical landings.
Cowcod	N of 4010	3 (Year Based)	0.45 (0.222)	0.567	0.441	0.441	2019	
Flag	N of 4010	3 (Year Based)	0.45 (0.222)	0.072	0.056	0.056	2011	
Freckled	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Greenblotched	N of 4010	3 (Year Based)	0.45 (0.222)	1.277	0.994	0.994	2011	
Greenspotted	42 - 4010	2 (Year Based)	0.45 (0.212)	9.453	7.449	7.449	2011	OFLs are projected using a 50% SPR harvest rate from the northern California model and updated in 2021. The portion of the assessed area north of 40°10' N lat. (22.2% of OFL from northern California model) based on average historical catch.
Greenspotted	WA - OR	3 (Year Based)	0.45 (0.222)	6.078	4.729	4.729	2011	
Greenstriped	N of 4010	3 (Year Based)	0.45 (0.222)	623.61	485.169	485.169	2009	OFL based on the MSY associated with the F_{MSY} proxy in the 2009 assessment. The portion of the coastwide stock north of 40°10' N lat. (84.5%) is based on the mean of the 2003-2008 swept area biomass estimates from the NMFS trawl survey.
Halfbanded	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Harlequin	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Honeycomb	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Mexican	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Pink	N of 4010	3 (Year Based)	0.45 (0.222)	0.004	0.003	0.003	2011	
Pinkrose	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Puget Sound	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Pygmy	N of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Redstripe	N of 4010	3 (Year Based)	0.45 (0.222)	269.911	209.990	209.990	2011	
Rosethorn	N of 4010	3 (Year Based)	0.45 (0.222)	12.897	10.034	10.034	2011	
Rosy	N of 4010	3 (Year Based)	0.45 (0.222)	3.034	2.361	2.361	2011	
Silvergray	N of 4010	3 (Year Based)	0.45 (0.222)	159.420	124.029	124.029	2011	
Speckled	N of 4010	3 (Year Based)	0.45 (0.222)	0.171	0.133	0.133	2011	
Squarespot	42 - 4010	3 (Year Based)	0.45 (0.222)				2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment of squarespot in CA. Apportionment?
Starry	N of 4010	3 (Year Based)	0.45 (0.222)	0.004	0.003	0.003	2011	
Stripetail	N of 4010	3 (Year Based)	0.45 (0.222)	40.395	31.428	31.428	2011	
Swordspine	N of 4010	3 (Year Based)	0.45 (0.222)	0.0001	0.0001	0.0001	2011	
Tiger	N of 4010	3 (Year Based)	0.45 (0.222)	0.969	0.754	0.754	2011	
Vermilion	WA	2 (Year Based)	0.45 (0.135)	0.7	0.606	0.606	2021	OFL projected from the 2021 assessment of vermilion rockfish in WA.
Vermilion	42 - 4010	1 (Year Based)	0.45 (0.070)	-	-	-	2021	OFL projected from the 2021 assessment of vermilion rockfish in CA. The OFLs N (4.4%) and S (95.6%) of 40°10' N lat. are based on an apportionment of the estimated biomass in CA N of 34°27' N lat.
Vermilion	OR	1 (Year Based)	0.45 (0.070)	13.29	12.36	12.36	2021	OFL projected from the 2021 assessment of vermilion rockfish in OR.
Shelf Rockfish South	S of 4010			1855	1483	1483	-	Sum of harvest specification contributions of component stocks in the complex.
Bronzespotted	S of 4010	3 (Year Based)	0.45 (0.222)	3.647	2.837	2.837	2011	
Chameleon	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Flag	S of 4010	3 (Year Based)	0.45 (0.222)	23.424	18.224	18.224	2011	
Freckled	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Greenblotched	S of 4010	3 (Year Based)	0.45 (0.222)	23.131	17.996	17.996	2011	
Greenspotted	4010 - 3427	2 (Year Based)	0.45 (0.212)	33.128	26.105	26.105	2011	OFLs are projected using a 50% SPR harvest rate from the northern California model and updated in 2021. The portion of the assessed area north of 40°10' N lat. (22.2% of OFL from northern California model) based on average historical catch.
Greenspotted	S of 3427	2 (Year Based)	0.45 (0.212)	45.86	36.138	36.138	2011	OFLs are projected using a 50% SPR harvest rate from the southern California model and updated in 2021.
Greenstriped	S of 4010	3 (Year Based)	0.45 (0.222)	114.39	88.995	88.995	2009	OFL based on the MSY associated with the FMSY proxy in the 2009 assessment. The portion of the coastwide stock south of 40°10' N lat. (15.5%) is based on the mean of the 2003-2008 swept area biomass estimates from the NMFS trawl survey.
Halfbanded	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Harlequin	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Honeycomb	S of 4010	3 (Year Based)	0.45 (0.222)	9.867	7.676	7.676	2011	
Mexican	S of 4010	3 (Year Based)	0.45 (0.222)	5.053	3.931	3.931	2011	
Pink	S of 4010	3 (Year Based)	0.45 (0.222)	2.5	1.945	1.945	2011	
Pinkrose	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Pygmy	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Redstripe	S of 4010	3 (Year Based)	0.45 (0.222)	0.493	0.383	0.383	2011	
Rosethorn	S of 4010	3 (Year Based)	0.45 (0.222)	2.131	1.658	1.658	2011	
Rosy	S of 4010	3 (Year Based)	0.45 (0.222)	44.508	34.627	34.627	2011	
Silvergray	S of 4010	3 (Year Based)	0.45 (0.222)	0.538	0.418	0.418	2011	
Speckled	S of 4010	3 (Year Based)	0.45 (0.222)	39.381	30.639	30.639	2011	

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Squarespot	S of 4010	2 (Year Based)	0.45 (0.222)				2021	OFL projected using a 50% SPR harvest rate from the 2021 assessment of squarespot in CA. Apportionment?
Starry	S of 4010	3 (Year Based)	0.45 (0.222)	62.572	48.681	48.681	2011	
Stripetail	S of 4010	3 (Year Based)	0.45 (0.222)	23.623	18.379	18.379	2011	
Swordspine	S of 4010	3 (Year Based)	0.45 (0.222)	14.216	11.06	11.06	2011	
Tiger	S of 4010	3 (Year Based)	0.45 (0.222)	0.04	0.031	0.031	2011	
Vermilion	4010 - 3427	1 (Year Based)	0.45 (0.070)	164.761	153.228	153.228	2021	OFL projected from the 2021 assessment of vermilion and sunset rockfishes in CA N of 34°27' N lat. The OFLs N (4.4%) and S (95.6%) of 40°10' N lat. are based on an apportionment of the estimated biomass in CA N of 34°27' N lat. The assessment is of vermilion and sunset rockfishes in combination.
Vermilion	S of 3427	2 (Year Based)	0.45 (0.135)	165.792	143.410	143.410	2021	OFL projected from the 2021 assessment of vermilion and sunset rockfishes in CA S of 34°27' N lat. The assessment is of vermilion and sunset rockfishes in combination.
Yellowtail Rockfish	S of 4010	3 (Year Based)	0.45 (0.222)	1064.439	828.134	828.134	2011	
Slope Rockfish North	N of 4010			1797	1516	1516	-	Sum of harvest specification contributions of component stocks in the complex.
Aurora	N of 4010	1 (Year Based)	0.45 (0.104)	17.355	15.550	15.550	2013	The portion of the coastwide stock north of 40°10' N lat. (19%) is based on average survey biomass.
Bank	N of 4010	3 (Year Based)	0.45 (0.222)	17.238	13.411	13.411	2011	
Blackgill Rockfish	N of 4010	3 (Year Based)	0.45 (0.222)	4.7	3.657	3.657	2011	
Redbanded	N of 4010	3 (Year Based)	0.45 (0.222)	45.262	35.214	35.214	2011	
Rougheye/Blackspotted	N of 4010	2 (Year Based)	0.45 (0.197)	233.24	190.790	190.790	2013	The coastwide OFLs are apportioned north (98%) and south (2%) based on average landings during 1985-2012.
Sharpchin	N of 4010	2 (Year Based)	0.45 (0.197)	282.691	227.001	227.001	2013	OFLs are apportioned north and south of 40°10' N lat. (80% N, 20% S) based on average swept area biomass estimates from the triennial survey.
Shortraker	N of 4010	3 (Year Based)	0.45 (0.222)	18.704	14.552	14.552	2011	
Splitnose	N of 4010	1 (Year Based)	0.45 (0.121)	985.044	865.854	865.854	2009	OFL projected using a 50% SPR harvest rate in the 2019 Updated Harvest Specification Projections. Coastwide OFL is apportioned N (35.8%) and S (64.2%) of 40°10' N lat. based on average historical (1916-2008) landings.

Stock/Complex	Area	Category	P* (buffer)	OFL	ABC	ACL	Assess Year	Notes
Yellowmouth	N of 4010	3 (Year Based)	0.45 (0.222)	192.447	149.724	149.724	2011	
Slope Rockfish South	S of 4010			868	697	697	-	Sum of harvest specification contributions of component stocks in the complex.
Aurora	S of 4010	1 (Year Based)	0.45 (0.104)	73.988	66.293	66.293	2013	The portion of the coastwide stock north of 40°10' N lat. (19%) is based on average survey biomass.
Bank	S of 4010	3 (Year Based)	0.45 (0.222)	503.215	391.501	391.501	2011	
Blackgill Rockfish	S of 4010	2 (Year Based)	0.45 (0.167)	204	169.932	169.932	2017	
Pacific Ocean Perch	S of 4010	3 (Year Based)	0.45 (0.222)	-	-	-	-	
Redbanded	S of 4010	3 (Year Based)	0.45 (0.222)	10.406	8.096	8.096	2011	
Rougheye/Blackspotted	S of 4010	2 (Year Based)	0.45 (0.197)	4.76	3.894	3.894	2013	The coastwide OFLs are apportioned north (98%) and south (2%) based on average landings during 1985-2012.
Sharpchin	S of 4010	2 (Year Based)	0.45 (0.197)	70.673	56.750	56.750	2013	OFLs are apportioned north and south of 40°10' N lat. (80% N, 20% S) based on average swept area biomass estimates from the triennial survey.
Shortraker	S of 4010	3 (Year Based)	0.45 (0.222)	0.105	0.082	0.082	2011	
Yellowmouth	S of 4010	3 (Year Based)	0.45 (0.222)	0.848	0.66	0.66	2011	