Table 2-1. 2021 harvest specifications (overfishing limits (OFLs in mt), acceptable biological catches (ABCs in mt), and annual catch limits (ACLs in mt)) under preferred harvest control rules and stock complex restructuring for determining these specifications, for West Coast groundfish stocks and stock complexes (overfished/rebuilding stocks in CAPS; stocks with new assessments in bold; component stocks in stock complexes in italics).

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
YELLOWEYE ROCKFISH	CW	1 (Year Based)	0.40 (0.144)	97	83	50	The ACL is derived from the 2017 yelloweye rebuilding analysis under the 65% SPR harvest rate.
Arrowtooth Flounder	CW	2 (Year Based)	0.40 (0.267)	13551	9933	9933	
Big Skate	CW	2 (Year Based)	0.45 (0.126)	1690	1477	1477	
Black Rockfish	WA	1 (Year Based)	0.45 (0.083)	319	293	293	
Black Rockfish	CA	1 (Year Based)	0.45 (0.083)	379	348	348	
Bocaccio	S of 4010	1 (Year Based)	0.45 (0.074)	1887	1748	1748	7.4% of the assessed area (Conception area N to Cape Blanco) OFL is deducted to account for the portion of the stock north of 40°10' N lat.
Cabezon	CA			225	210	210	
Cabezon	3427 - 42	1 (Year Based)	0.45 (0.065)	201.8	188.683		
Cabezon	S of 3427	1 (Year Based)	0.45 (0.065)	23.3	21.7855		
Cabezon/Kelp Greenling	WA			25	20	20	
Cabezon	WA	3 (Year Based)	0.45 (0.222)	18.3	14.2374	14.2374	
Kelp Greenling	WA	3 (Year Based)	0.45 (0.222)	7.1	5.5238	5.5238	
Cabezon/Kelp Greenling	OR			215	198	198	
Cabezon	OR	1 (Year Based)	0.45 (0.065)	58.3	54.5105	54.5105	
Kelp Greenling	OR	1 (Year Based)	0.45 (0.083)	157	143.969	143.969	
California Scorpionfish	CW	CA Scorpionfish (Year Based)	0.45 (0.086)	319	291	291	
Canary Rockfish	CW	1 (Year Based)	0.45 (0.083)	1459	1338	1338	
Chilipepper	S of 4010	1 (Year Based)	0.45 (0.083)	2571	2358	2358	93% of the coastwide chilipepper OFL is apportioned S of 40°10' N lat. based on average historical landings.
Cowcod	S of 4010			114	84	84	
Cowcod	S of 3427	2 (Year Based)	0.40 (0.238)	95	72.39	72.39	

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
Cowcod	3427 - 4010	3 (Year Based)	0.40 (0.398)	18.9	11.3778	11.3778	
Darkblotched Rockfish	CW	1 (Year Based)	0.45 (0.074)	953	882	882	
Dover Sole	CW	1 (Year Based)	0.45 (0.100)	93547	84192	50000	
English Sole	CW	2 (Year Based)	0.45 (0.174)	11107	9175	9175	
Lingcod	N of 4010	1 (Year Based)	0.45 (0.074)	5816	5386	5369	OFLs are projected from the 2017 assessment, which assessed two stocks north and south of 42° N lat. The relative biomass and OFLs are reapportioned north and south of the 40°10' N lat. management line by using the most recent 5-year average percentage of survey biomass of lingcod between 40°10' and 42° N lat., which is 21.3% of the survey biomass in California.
Lingcod	S of 4010	1 (Year Based)	0.45 (0.074)	1255	1162	1102	OFLs are projected from the 2017 assessment, which assessed two stocks north and south of 42° N lat. The relative biomass and OFLs are reapportioned north and south of the 40°10' N lat. management line by using the most recent 5-year average percentage of survey biomass of lingcod between 40°10' and 42° N lat., which is 21.3% of the survey biomass in California.
Longnose Skate	CW	2 (Year Based)	0.45 (0.126)	2086	1823	1823	
Longspine Thornyhead	CW	2 (Year Based)	0.40 (0.320)	5097	3466		
Longspine Thornyhead	N of 3427	2 (Year Based)	0.40 (0.320)			2634	ACLs are determined based on an apportionment of the coastwide ABC north (76%) and south (24%) of 34°27' N lat. based on the 2003-2012 average swept area biomass estimated north and south of Pt. Conception at 34°27' N lat. in the NWFSC trawl survey.
Longspine Thornyhead	S of 3427	2 (Year Based)	0.40 (0.320)			832	ACLs are determined based on an apportionment of the coastwide ABC north (76%) and south (24%) of 34°27' N lat. based on the 2003-2012 average swept area biomass estimated north and south of Pt. Conception at 34°27' N lat. in the NWFSC trawl survey.
Pacific Ocean Perch	N of 4010	2 (Year Based)	0.45 (0.143)	4497	3854	3854	
Petrale Sole	CW	1 (Year Based)	0.45 (0.065)	4402	4115	4115	

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
Sablefish	CW	1 (Year Based)	0.45 (0.065)	9402	8791		
Sablefish	N of 36	1 (Year Based)	0.45 (0.065)			6479	The ACLs are apportioned north (78.4%) and south (21.5%) of 40°10' N lat. using the coastwide ABCs based on average trawl survey biomass from 2014-2018.
Sablefish	S of 36	1 (Year Based)	0.45 (0.065)			2312	The ACLs are apportioned north (78.4%) and south (21.5%) of 40°10' N lat. using the coastwide ABCs based on average trawl survey biomass from 2014-2018.
Shortbelly	CW	3 (Year Based)	0.40 (0.398)	6950	4184	2000	
Shortspine Thornyhead	CW	2 (Year Based)	0.40 (0.320)	3211	2183		
Shortspine Thornyhead	N of 3427	2 (Year Based)	0.40 (0.320)			1428	ACLs are determined based on an apportionment of the coastwide ABC north (65.4%) and south (34.6%) of 34°27' N lat. based on the 2003-2012 average swept area biomass estimated north and south of Pt. Conception at 34°27' N lat. in the NWFSC trawl survey.
Shortspine Thornyhead	S of 3427	2 (Year Based)	0.40 (0.320)			756	ACLs are determined based on an apportionment of the coastwide ABC north (65.4%) and south (34.6%) of 34°27' N lat. based on the 2003-2012 average swept area biomass estimated north and south of Pt. Conception at 34°27' N lat. in the NWFSC trawl survey.
Spiny Dogfish	CW	2 (Year Based)	0.40 (0.346)	2479	1621	1621	
Splitnose	S of 4010	1 (Year Based)	0.45 (0.108)	1868	1666	1666	
Widow Rockfish	CW	1 (Year Based)	0.45 (0.065)	15749	14725	14725	
Yellowtail Rockfish	N of 4010	1 (Year Based)	0.45 (0.074)	6534	6050	6050	
Pacific Cod	CW	3 (Year Based)	0.40 (0.398)	3200	1926	1600	
Starry Flounder	CW	3 (Year Based)	0.40 (0.398)	652	392	392	
Blue/Deacon/Black Rockfish	OR		0.45 (0.044)	676	603	603	
Black Rockfish	OR	2 (Year Based)	NA	570	512	512	
Blue	OR	2 (Year Based)	0.45 (0.143)	105.7	90.5849	90.5849	
Nearshore Rockfish North	N of 4010			94	79	79	
Black and Yellow	N of 4010	3 (Year Based)	0.45 (0.222)	0.014	0.0109	0.0109	

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
Blue	42 - 4010	2 (Year Based)	0.45 (0.143)	33.4	28.6238	28.6238	10% of the CA OFL N of 34°27' N lat. 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	6.3018	6.3018	
Brown	N of 4010	2 (Year Based)	0.45 (0.174)	2.0985	1.7333	1.7333	The portion of the coastwide stock north of 40`10 N lat. (1.2%) based on the proportion of cumulative removals by area during 1916-2012.
Calico	N of 4010	3 (Year Based)	0.45 (0.222)				
China	WA	2 (Year Based)	0.45 (0.159)	10.82	9.0996	9.0996	OFLs are projected from the Northern Model in the 2015 assessment.
China	4010 - 4616	2 (Year Based)	0.45 (0.159)	21.57	18.1404	18.1404	OFLs are projected from the Central Model in the 2015 assessment.
Copper	N of 4010	2 (Year Based)	0.45 (0.174)	9.8178	8.1095	8.1095	7.3% of the OFL estimated from the Northern Model (34°27' N lat. to U.SCan border) is apportioned N of 40°10' N lat. based on the proportion of cumulative removals by area during 1916-2012.
Gopher	N of 4010	3 (Year Based)	0.45 (0.222)				·
Grass	N of 4010	3 (Year Based)	0.45 (0.222)	0.657	0.5111	0.5111	
Kelp	N of 4010	3 (Year Based)	0.45 (0.222)	0.009	0.007	0.007	
Olive	N of 4010	3 (Year Based)	0.45 (0.222)	0.315	0.2451	0.2451	
Quillback	N of 4010	3 (Year Based)	0.45 (0.222)	7.37	5.7339	5.7339	
Treefish	N of 4010	3 (Year Based)	0.45 (0.222)	0.2165	0.1684	0.1684	
Nearshore Rockfish South	S of 4010			1232	1016	1016	
Blue	4010 - 3427	2 (Year Based)	0.45 (0.143)	300.6	257.6142	257.6142	90% of the CA OFL N of 34°27' N lat. 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	16.9604	16.9604	
Brown	S of 4010	2 (Year Based)	0.45 (0.174)	179.7015	148.4335	148.4335	The portion of the coastwide stock north of 40`10 N lat. (98.8%) based on the proportion of cumulative removals by area during 1916-2012.
Calico	S of 4010	3 (Year Based)	0.45 (0.222)				
China	S of 4010	2 (Year Based)	0.45 (0.159)	15.46	13.0019	12.22	OFLs are projected from the Southern Model in the 2015 assessment.
Copper	S of 4010	2 (Year Based)	0.45 (0.174)	247.4322	204.379	204.379	92.7% of the OFL estimated from the Northern Model (34°27' N lat. to U.SCan border) is apportioned S of 40°10' N lat.

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
							based on the proportion of cumulative removals by area during 1916-2012.
Gopher	S of 4010	2 (Year Based)	0.45 (0.126)	136	118.864	118.864	Assessed and managed as a "complex" with Gopher and Black-and-Yellow rockfishes.
Grass	S of 4010	3 (Year Based)	0.45 (0.222)	59.6267	46.3896	46.3896	
Kelp	S of 4010	3 (Year Based)	0.45 (0.222)	27.6594	21.519	21.519	
Olive	S of 4010	3 (Year Based)	0.45 (0.222)	224.6426	174.7719	174.7719	
Quillback	S of 4010	3 (Year Based)	0.45 (0.222)	5.3852	4.1897	4.1897	
Treefish	S of 4010	3 (Year Based)	0.45 (0.222)	13.2295	10.2926	10.2926	
Other Fish	CW			286	223	223	
Kelp Greenling	CA	3 (Year Based)	0.45 (0.222)	118.9	92.5042	92.5042	
Leopard Shark	CW	3 (Year Based)	0.45 (0.222)	167.1	130.0038	130	
Other Flatfish	CW			7714	4802	4802	
Butter Sole	CW	3 (Year Based)	0.40 (0.398)	4.631	2.7879	2.7879	Based on the average catch during 1994-1998 + a 60% discard rate estimated from the EDCP study.
Curlfin Sole	CW	3 (Year Based)	0.40 (0.398)	8.242	4.9617	4.9617	Based on the average catch during 1994-1998 + a 60% discard rate estimated from the EDCP study.
Flathead Sole	CW	3 (Year Based)	0.40 (0.398)	35	21.07	21.07	Max. catch = 35 mt in 2005
Pacific Sanddab	CW	3 (Year Based)	0.40 (0.398)	4801	2890.202	2890.202	
Rex Sole	CW	2 (Year Based)	0.40 (0.320)	2025.61	1377.4148	1377.4148	Bayesian projections differ from the calculated ABCs.
Rock Sole	CW	3 (Year Based)	0.40 (0.398)	66.7	40.1534	40.1534	
Sand Sole	CW	3 (Year Based)	0.40 (0.398)	773.2	465.4664	465.4664	
Shelf Rockfish North	N of 4010			1888	1511	1511	
Bocaccio	N of 4010	3 (Year Based)	0.45 (0.222)	284	220.952	220.952	
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 (0.083)	193.55	177.4854	177.4854	7% of the coastwide chilipepper OFL is apportioned N of 40°10' N lat. based on average historical landings.
Cowcod	N of 4010	3 (Year Based)	0.45 (0.222)	0.567	0.4411	0.4411	
Flag	N of 4010	3 (Year Based)	0.45 (0.222)	0.1	0.0778	0.0778	
Freckled	N of 4010	3 (Year Based)	0.45 (0.222)				
Greenblotched	N of 4010	3 (Year Based)	0.45 (0.222)	1.3	1.0114	1.0114	

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
Greenspotted	42 - 4010	2 (Year Based)	0.45 (0.190)	9.3	7.533	7.34	The OFLs projected from the Northern California Model are apportioned north (22.2%) and south (77.8%) of 40°10' N lat. based on average historical (1978-2001) landings.
Greenspotted	WA - OR	3 (Year Based)	0.45 (0.222)	6.1	4.7458	4.7458	
Greenstriped	N of 4010	2 (Year Based)	0.45 (0.205)	896.1225	712.4174	712.4174	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	0.0031	0.0031	
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	209.9822	209.9822	
Rosethorn	N of 4010	3 (Year Based)	0.45 (0.222)	12.9	10.0362	10.0362	
Rosy	N of 4010	3 (Year Based)	0.45 (0.222)	3	2.334	2.334	
Silvergray	N of 4010	3 (Year Based)	0.45 (0.222)	159.4	124.0132	124.0132	
Speckled	N of 4010	3 (Year Based)	0.45 (0.222)	0.2	0.1556	0.1556	
Squarespot	N of 4010	3 (Year Based)	0.45 (0.222)	0.2	0.1556	0.1556	
Starry	N of 4010	3 (Year Based)	0.45 (0.222)	0.0037	0.0029	0.0029	
Stripetail	N of 4010	3 (Year Based)	0.45 (0.222)	40.4	31.4312	31.4312	
Swordspine	N of 4010	3 (Year Based)	0.45 (0.222)	0.0001	0.0001	0.0001	
Tiger	N of 4010	3 (Year Based)	0.45 (0.222)	1	0.778	0.778	
Vermilion	N of 4010	3 (Year Based)	0.45 (0.222)	9.7	7.5466	7.5466	
Shelf Rockfish South	S of 4010			1842	1439	1438	
Bronzespotted	S of 4010	3 (Year Based)	0.45 (0.222)	3.6	2.8008	2.8008	
Chameleon	S of 4010	3 (Year Based)	0.45 (0.222)				
Flag	S of 4010	3 (Year Based)	0.45 (0.222)	23.4	18.2052	18.2052	
Freckled	S of 4010	3 (Year Based)	0.45 (0.222)				

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
Greenblotched	S of 4010	3 (Year Based)	0.45 (0.222)	23.1	17.9718	17.9718	
Greenspotted	4010 - 3427	2 (Year Based)	0.45 (0.190)	32.58	26.3898	25.71	The OFLs projected from the Northern California Model are apportioned north (22.2%) and south (77.8%) of 40°10' N lat. based on average historical (1978-2001) landings.
Greenspotted	S of 3427	2 (Year Based)	0.45 (0.190)	45.4321	36.8	36.8	
Greenstriped	S of 4010	2 (Year Based)	0.45 (0.205)	164.3775	130.6801	130.6801	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)	9.9	7.7022	7.7022	
Mexican	S of 4010	3 (Year Based)	0.45 (0.222)	5.1	3.9678	3.9678	
Pink	S of 4010	3 (Year Based)	0.45 (0.222)	2.5	1.945	1.945	
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	
Rosethorn	S of 4010	3 (Year Based)	0.45 (0.222)	2.1	1.6338	1.6338	
Rosy	S of 4010	3 (Year Based)	0.45 (0.222)	44.5	34.621	34.621	
Silvergray	S of 4010	3 (Year Based)	0.45 (0.222)	0.5	0.389	0.389	
Speckled	S of 4010	3 (Year Based)	0.45 (0.222)	39.4	30.6532	30.6532	
Squarespot	S of 4010	3 (Year Based)	0.45 (0.222)	11.1	8.6358	8.6358	
Starry	S of 4010	3 (Year Based)	0.45 (0.222)	62.6	48.7028	48.7028	
Stripetail	S of 4010	3 (Year Based)	0.45 (0.222)	23.6	18.3608	18.3608	
Swordspine	S of 4010	3 (Year Based)	0.45 (0.222)	14.2	11.0476	11.0476	
Tiger	S of 4010	3 (Year Based)	0.45 (0.222)	0.04	0.0311	0.0311	
Vermilion	S of 4010	3 (Year Based)	0.45 (0.222)	269.3	209.5154	209.5154	
Yellowtail Rockfish	S of 4010	3 (Year Based)	0.45 (0.222)	1064.4	828.1032	828.1032	
Slope Rockfish North	N of 4010			1862	1595	1595	
Aurora	N of 4010	1 (Year Based)	0.45 (0.091)	17.5	15.9075	15.9075	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	13.3816	13.3816	

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
Blackgill Rockfish	N of 4010	3 (Year Based)	0.45 (0.222)	4.7	3.6566	3.6566	
Redbanded	N of 4010	3 (Year Based)	0.45 (0.222)	45.3	35.2434	35.2434	
Rougheye/Blackspotted	N of 4010	2 (Year Based)	0.45 (0.174)	232.26	191.8468	191.8468	98% of the coastwide OFL is apportioned north of 40°10' N. lat. based on average landings during 1985-2012.
Sharpchin	N of 4010	2 (Year Based)	0.45 (0.174)	292.3032	241.4424	241.4424	80% of coastwide OFL is apportioned to the N of 40°10' N lat.
Shortraker	N of 4010	3 (Year Based)	0.45 (0.222)	18.7	14.5486	14.5486	
Splitnose	N of 4010	1 (Year Based)	0.45 (0.108)	1041.77	929.2588	929.2588	
Yellowmouth	N of 4010	3 (Year Based)	0.45 (0.222)	192.4	149.6872	149.6872	
Slope Rockfish South	S of 4010			873	709	709	
Aurora	S of 4010	1 (Year Based)	0.45 (0.091)	74.5	67.7205	67.7205	The portion of the coastwide stock south of 40°10' N lat. (81%) is based on average survey biomass.
Bank	S of 4010	3 (Year Based)	0.45 (0.222)	503.2	391.4896	391.4896	
Blackgill Rockfish	S of 4010	2 (Year Based)	0.45 (0.143)	206	176.542	176.542	
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	8.0912	8.0912	
Rougheye/Blackspotted	S of 4010	2 (Year Based)	0.45 (0.174)	4.74	3.9152	3.9152	2% of the coastwide OFL is apportioned south of 40°10' N. lat. based on average landings during 1985-2012.
Sharpchin	S of 4010	2 (Year Based)	0.45 (0.174)	73.0758	60.3606	60.3606	20% of coastwide OFLs are apportioned S of 40°10' N lat.
Shortraker	S of 4010	3 (Year Based)	0.45 (0.222)	0.1	0.0778	0.0778	
Yellowmouth	S of 4010	3 (Year Based)	0.45 (0.222)	0.8	0.6224	0.6224	

Table 2-2. 2022 harvest specifications (overfishing limits (OFLs in mt), acceptable biological catches (ABCs in mt), and annual catch limits (ACLs in mt)) under preferred harvest control rules and stock complex restructuring for determining these specifications, for West Coast groundfish stocks and stock complexes (overfished/rebuilding stocks in CAPS; stocks with new assessments in bold; component stocks in stock complexes in italics).

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
YELLOWEYE ROCKFISH	CW	1 (Year Based)	0.40 (0.152)	98	83	51	The ACL is derived from the 2017 yelloweye rebuilding analysis under the 65% SPR harvest rate.
Arrowtooth Flounder	CW	2 (Year Based)	0.40 (0.281)	11764	8458	8458	
Big Skate	CW	2 (Year Based)	0.45 (0.135)	1606	1389	1389	
Black Rockfish	WA	1 (Year Based)	0.45 (0.087)	319	291	291	
Black Rockfish	CA	1 (Year Based)	0.45 (0.087)	373	341	341	
Bocaccio	S of 4010	1 (Year Based)	0.45 (0.078)	1870	1724	1724	7.4% of the assessed area (Conception area N to Cape Blanco) OFL is deducted to account for the portion of the stock north of 40°10' N lat.
Cabezon	CA			210	195	195	
Cabezon	3427 - 42	1 (Year Based)	0.45 (0.070)	187.6	174.468		
Cabezon	S of 3427	1 (Year Based)	0.45 (0.070)	22.6	21.018		
Cabezon/Kelp Greenling	WA			22	17	17	
Cabezon	WA	3 (Year Based)	0.45 (0.222)	14.9	11.5922	11.5922	
Kelp Greenling	WA	3 (Year Based)	0.45 (0.222)	7.1	5.5238	5.5238	
Cabezon/Kelp Greenling	OR			208	190	190	
Cabezon	OR	1 (Year Based)	0.45 (0.070)	56.1	52.173	52.173	
Kelp Greenling	OR	1 (Year Based)	0.45 (0.087)	151.4	138.2282	138.2282	
California Scorpionfish	CW	CA Scorpionfish (Year Based)	0.45 (0.091)	303	275	275	
Canary Rockfish	CW	1 (Year Based)	0.45 (0.087)	1432	1307	1307	
Chilipepper	S of 4010	1 (Year Based)	0.45 (0.087)	2474	2259	2259	93% of the coastwide chilipepper OFL is apportioned S of 40°10' N lat. based on average historical landings.
Cowcod	S of 4010			113	82	82	
Cowcod	S of 3427	2 (Year Based)	0.40 (0.253)	93.9412	70.1433	70.1433	
Cowcod	3427 - 4010	3 (Year Based)	0.40 (0.398)	19.2	11.5584	11.5584	
Darkblotched Rockfish	CW	1 (Year Based)	0.45 (0.078)	901	831	831	
Dover Sole	CW	1 (Year Based)	0.45 (0.104)	87540	78436	50000	
English Sole	CW	2 (Year Based)	0.45 (0.182)	11127	9101	9101	

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
Lingcod	N of 4010	1 (Year Based)	0.45 (0.078)	5395	4974	4958	OFLs are projected from the 2017 assessment, which assessed two stocks north and south of 42° N lat. The relative biomass and OFLs are reapportioned north and south of the 40°10' N lat. management line by using the most recent 5-year average percentage of survey biomass of lingcod between 40°10' and 42° N lat., which is 21.3% of the survey biomass in California.
Lingcod	S of 4010	1 (Year Based)	0.45 (0.078)	1334	1230	1172	OFLs are projected from the 2017 assessment, which assessed two stocks north and south of 42° N lat. The relative biomass and OFLs are reapportioned north and south of the 40°10' N lat. management line by using the most recent 5-year average percentage of survey biomass of lingcod between 40°10' and 42° N lat., which is 21.3% of the survey biomass in California.
Longnose Skate	CW	2 (Year Based)	0.45 (0.135)	2036	1761	1761	
Longspine Thornyhead	CW	2 (Year Based)	0.40 (0.333)	4838	3227		
Longspine Thornyhead	N of 3427	2 (Year Based)	0.40 (0.333)			2452	ACLs are determined based on an apportionment of the coastwide ABC north (76%) and south (24%) of 34°27' N lat. based on the 2003-2012 average swept area biomass estimated north and south of Pt. Conception at 34°27' N lat. in the NWFSC trawl survey.
Longspine Thornyhead	S of 3427	2 (Year Based)	0.40 (0.333)			774	ACLs are determined based on an apportionment of the coastwide ABC north (76%) and south (24%) of 34°27' N lat. based on the 2003-2012 average swept area biomass estimated north and south of Pt. Conception at 34°27' N lat. in the NWFSC trawl survey.
Pacific Ocean Perch	N of 4010	2 (Year Based)	0.45 (0.151)	4371	3711	3711	
Petrale Sole	CW	1 (Year Based)	0.45 (0.070)	3936	3660	3660	

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
Sablefish	CW	1 (Year Based)	0.45 (0.070)	9005	8375		
Sablefish	N of 36	1 (Year Based)	0.45 (0.070)			6172	The ACLs are apportioned north (78.4%) and south (21.5%) of 40°10' N lat. using the coastwide ABCs based on average trawl survey biomass from 2014-2018.
Sablefish	S of 36	1 (Year Based)	0.45 (0.070)			2203	The ACLs are apportioned north (78.4%) and south (21.5%) of 40°10' N lat. using the coastwide ABCs based on average trawl survey biomass from 2014-2018.
Shortbelly	CW	3 (Year Based)	0.40 (0.398)	6950	4184	2000	
Shortspine Thornyhead	CW	2 (Year Based)	0.40 (0.333)	3194	2130		
Shortspine Thornyhead	N of 3427	2 (Year Based)	0.40 (0.333)			1393	ACLs are determined based on an apportionment of the coastwide ABC north (65.4%) and south (34.6%) of 34°27' N lat. based on the 2003-2012 average swept area biomass estimated north and south of Pt. Conception at 34°27' N lat. in the NWFSC trawl survey.
Shortspine Thornyhead	S of 3427	2 (Year Based)	0.40 (0.333)			737	ACLs are determined based on an apportionment of the coastwide ABC north (65.4%) and south (34.6%) of 34°27' N lat. based on the 2003-2012 average swept area biomass estimated north and south of Pt. Conception at 34°27' N lat. in the NWFSC trawl survey.
Spiny Dogfish	CW	2 (Year Based)	0.40 (0.358)	2469	1585	1585	•
Splitnose	S of 4010	1 (Year Based)	0.45 (0.113)	1837	1630	1630	
Widow Rockfish	CW	1 (Year Based)	0.45 (0.070)	14826	13788	13788	
Yellowtail Rockfish	N of 4010	1 (Year Based)	0.45 (0.078)	6324	5831	5831	
Pacific Cod	CW	3 (Year Based)	0.40 (0.398)	3200	1926	1600	
Starry Flounder	CW	3 (Year Based)	0.40 (0.398)	652	392	392	
Blue/Deacon/Black Rockfish	OR		0.45 (0.044)	672	600	600	
Black Rockfish	OR	2 (Year Based)	NA	566	512	512	
Blue	OR	2 (Year Based)	0.45 (0.151)	103.1	87.5319	87.5319	
Nearshore Rockfish North	N of 4010			93	77	77	
Black and Yellow	N of 4010	3 (Year Based)	0.45 (0.222)	0.0135	0.0105	0.0105	

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
Blue	42 - 4010	2 (Year Based)	0.45 (0.151)	33.6	28.5264	28.5264	10% of the CA OFL N of 34°27' N lat. 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	6.0684	6.0684	
Brown	N of 4010	2 (Year Based)	0.45 (0.182)	2.0846	1.7052	1.7052	The portion of the coastwide stock north of 40`10 N lat. (1.2%) based on the proportion of cumulative removals by area during 1916-2012.
Calico	N of 4010	3 (Year Based)	0.45 (0.222)				
China	WA	2 (Year Based)	0.45 (0.167)	10.43	8.6882	8.6882	OFLs are projected from the Northern Model in the 2015 assessment.
China	4010 - 4616	2 (Year Based)	0.45 (0.167)	21.08	17.5596	17.5596	OFLs are projected from the Central Model in the 2015 assessment.
Copper	N of 4010	2 (Year Based)	0.45 (0.182)	9.8594	8.065	8.065	7.3% of the OFL estimated from the Northern Model (34°27' N lat. to U.SCan border) is apportioned N of 40°10' N lat. based on the proportion of cumulative removals by area during 1916-2012.
Gopher	N of 4010	3 (Year Based)	0.45 (0.222)				
Grass	N of 4010	3 (Year Based)	0.45 (0.222)	0.6567	0.5109	0.5109	
Kelp	N of 4010	3 (Year Based)	0.45 (0.222)	0.0092	0.0072	0.0072	
Olive	N of 4010	3 (Year Based)	0.45 (0.222)	0.3152	0.2452	0.2452	
Quillback	N of 4010	3 (Year Based)	0.45 (0.222)	7.3742	5.7371	5.7371	
Treefish	N of 4010	3 (Year Based)	0.45 (0.222)	0.2165	0.1684	0.1684	
Nearshore Rockfish South	S of 4010			1233	1011	1010	
Blue	4010 - 3427	2 (Year Based)	0.45 (0.151)	302.4	256.7376	256.7376	90% of the CA OFL N of 34°27' N lat. 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	16.9604	16.9604	
Brown	S of 4010	2 (Year Based)	0.45 (0.182)	178.5154	146.0256	146.0256	The portion of the coastwide stock north of 40`10 N lat. (98.8%) based on the proportion of cumulative removals by area during 1916-2012.
Calico	S of 4010	3 (Year Based)	0.45 (0.222)				
China	S of 4010	2 (Year Based)	0.45 (0.167)	15.94	13.278	12.21	OFLs are projected from the Southern Model in the 2015 assessment.

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
Copper	S of 4010	2 (Year Based)	0.45 (0.182)	246.9806	202.0301	202.0301	92.7% of the OFL estimated from the Northern Model (34°27' N lat. to U.SCan border) is apportioned S of 40°10' N lat. based on the proportion of cumulative removals by area during 1916-2012.
Gopher	S of 4010	2 (Year Based)	0.45 (0.135)	137	118.505	118.505	Assessed and managed as a "complex" with Gopher and Black-and-Yellow rockfishes.
Grass	S of 4010	3 (Year Based)	0.45 (0.222)	59.6267	46.3896	46.3896	
Kelp	S of 4010	3 (Year Based)	0.45 (0.222)	27.6594	21.519	21.519	
Olive	S of 4010	3 (Year Based)	0.45 (0.222)	224.6426	174.7719	174.7719	
Quillback	S of 4010	3 (Year Based)	0.45 (0.222)	5.3852	4.1897	4.1897	
Treefish	S of 4010	3 (Year Based)	0.45 (0.222)	13.2295	10.2926	10.2926	
Other Fish	CW			286	223	223	
Kelp Greenling	CA	3 (Year Based)	0.45 (0.222)	118.9	92.5042	92.5042	
Leopard Shark	CW	3 (Year Based)	0.45 (0.222)	167.1	130.0038	130	
Other Flatfish	CW			7808	4838	4838	
Butter Sole	CW	3 (Year Based)	0.40 (0.398)	4.6308	2.7877	2.7877	Based on the average catch during 1994-1998 + a 60% discard rate estimated from the EDCP study.
Curlfin Sole	CW	3 (Year Based)	0.40 (0.398)	8.2423	4.9619	4.9619	Based on the average catch during 1994-1998 + a 60% discard rate estimated from the EDCP study.
Flathead Sole	CW	3 (Year Based)	0.40 (0.398)	35	21.07	21.07	Max. catch = 35 mt in 2005
Pacific Sanddab	CW	3 (Year Based)	0.40 (0.398)	4801	2890.202	2890.202	
Rex Sole	CW	2 (Year Based)	0.40 (0.333)	2119.65	1413.8066	1413.8066	Bayesian projections differ from the calculated ABCs.
Rock Sole	CW	3 (Year Based)	0.40 (0.398)	66.7	40.1534	40.1534	
Sand Sole	CW	3 (Year Based)	0.40 (0.398)	773.2	465.4664	465.4664	
Shelf Rockfish North	N of 4010			1821	1450	1450	
Восассіо	N of 4010	3 (Year Based)	0.45 (0.222)	284.0136	220.9626	220.9626	
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 (0.087)	186.2	170.0006	170.0006	7% of the coastwide chilipepper OFL is apportioned N of 40°10' N lat. based on average historical landings.

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
Cowcod	N of 4010	3 (Year Based)	0.45 (0.222)	0.567	0.4411	0.4411	
Flag	N of 4010	3 (Year Based)	0.45 (0.222)	0.0724	0.0563	0.0563	
Freckled	N of 4010	3 (Year Based)	0.45 (0.222)				
Greenblotched	N of 4010	3 (Year Based)	0.45 (0.222)	1.2774	0.9938	0.9938	
Greenspotted	42 - 4010	2 (Year Based)	0.45 (0.197)	9.34	7.5	7.33	The OFLs projected from the Northern California Model are apportioned north (22.2%) and south (77.8%) of 40°10' N lat. based on average historical (1978-2001) landings.
Greenspotted	WA - OR	3 (Year Based)	0.45 (0.222)	6.078	4.7287	4.7287	
Greenstriped	N of 4010	2 (Year Based)	0.45 (0.212)	836.719	659.3346	659.3346	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)	0.0037	0.0029	0.0029	
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)	269.9106	209.9904	209.9904	
Rosethorn	N of 4010	3 (Year Based)	0.45 (0.222)	12.8971	10.0339	10.0339	
Rosy	N of 4010	3 (Year Based)	0.45 (0.222)	3.034	2.3605	2.3605	
Silvergray	N of 4010	3 (Year Based)	0.45 (0.222)	159.4204	124.0291	124.0291	

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
Speckled	N of 4010	3 (Year Based)	0.45 (0.222)	0.1711	0.1331	0.1331	
Squarespot	N of 4010	3 (Year Based)	0.45 (0.222)	0.1724	0.1341	0.1341	
Starry	N of 4010	3 (Year Based)	0.45 (0.222)	0.0037	0.0029	0.0029	
Stripetail	N of 4010	3 (Year Based)	0.45 (0.222)	40.3954	31.4276	31.4276	
Swordspine	N of 4010	3 (Year Based)	0.45 (0.222)	0.0001	0.0001	0.0001	
Tiger	N of 4010	3 (Year Based)	0.45 (0.222)	0.9689	0.7538	0.7538	
Vermilion	N of 4010	3 (Year Based)	0.45 (0.222)	9.7168	7.5597	7.5597	
Shelf Rockfish South	S of 4010			1832	1429	1428	
Bronzespotted	S of 4010	3 (Year Based)	0.45 (0.222)	3.6465	2.837	2.837	
Chameleon	S of 4010	3 (Year Based)	0.45 (0.222)				
Flag	S of 4010	3 (Year Based)	0.45 (0.222)	23.4239	18.2238	18.2238	
Freckled	S of 4010	3 (Year Based)	0.45 (0.222)				
Greenblotched	S of 4010	3 (Year Based)	0.45 (0.222)	23.1305	17.9955	17.9955	
Greenspotted	4010 - 3427	2 (Year Based)	0.45 (0.197)	32.72	26.2742	25.71	The OFLs projected from the Northern California Model are apportioned north (22.2%) and south (77.8%) of 40°10' N lat. based on average historical (1978-2001) landings.
Greenspotted	S of 3427	2 (Year Based)	0.45 (0.197)	45.5369	36.5661	36.5661	
Greenstriped	S of 4010	2 (Year Based)	0.45 (0.212)	153.481	120.943	120.943	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)	9.8668	7.6764	7.6764	
Mexican	S of 4010	3 (Year Based)	0.45 (0.222)	5.0532	3.9314	3.9314	
Pink	S of 4010	3 (Year Based)	0.45 (0.222)	2.5	1.945	1.945	
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)	0.4926	0.3832	0.3832	

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
Rosethorn	S of 4010	3 (Year Based)	0.45 (0.222)	2.1305	1.6575	1.6575	
Rosy	S of 4010	3 (Year Based)	0.45 (0.222)	44.5082	34.6274	34.6274	
Silvergray	S of 4010	3 (Year Based)	0.45 (0.222)	0.5376	0.4183	0.4183	
Speckled	S of 4010	3 (Year Based)	0.45 (0.222)	39.3813	30.6387	30.6387	
Squarespot	S of 4010	3 (Year Based)	0.45 (0.222)	11.1	8.6358	8.6358	
Starry	S of 4010	3 (Year Based)	0.45 (0.222)	62.5716	48.6807	48.6807	
Stripetail	S of 4010	3 (Year Based)	0.45 (0.222)	23.6233	18.3789	18.3789	
Swordspine	S of 4010	3 (Year Based)	0.45 (0.222)	14.2159	11.06	11.06	
Tiger	S of 4010	3 (Year Based)	0.45 (0.222)	0.0399	0.031	0.031	
Vermilion	S of 4010	3 (Year Based)	0.45 (0.222)	269.2764	209.497	209.497	
Yellowtail Rockfish	S of 4010	3 (Year Based)	0.45 (0.222)	1064.4392	828.1337	828.1337	
Slope Rockfish North	N of 4010			1842	1568	1568	
Aurora	N of 4010	1 (Year Based)	0.45 (0.096)	17.4	15.7296	15.7296	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)	17.2375	13.4108	13.4108	
Blackgill Rockfish	N of 4010	3 (Year Based)	0.45 (0.222)	4.7	3.6566	3.6566	
Redbanded	N of 4010	3 (Year Based)	0.45 (0.222)	45.2618	35.2137	35.2137	
Rougheye/Blackspotted	N of 4010	2 (Year Based)	0.45 (0.182)	233.24	190.7903	190.7903	98% of the coastwide OFL is apportioned north of 40°10' N. lat. based on average landings during 1985-2012.
Sharpchin	N of 4010	2 (Year Based)	0.45 (0.182)	288.8576	236.2855	236.2855	80% of coastwide OFL is apportioned to the N of 40°10' N lat.
Shortraker	N of 4010	3 (Year Based)	0.45 (0.222)	18.7038	14.5516	14.5516	
Splitnose	N of 4010	1 (Year Based)	0.45 (0.113)	1024.53	908.7581	908.7581	
Yellowmouth	N of 4010	3 (Year Based)	0.45 (0.222)	192.4467	149.7235	149.7235	
Slope Rockfish South	S of 4010			871	705	705	
Aurora	S of 4010	1 (Year Based)	0.45 (0.096)	74.4	67.2576	67.2576	The portion of the coastwide stock south of 40°10' N lat. (81%) is based on average survey biomass.
Bank	S of 4010	3 (Year Based)	0.45 (0.222)	503.215	391.5013	391.5013	
Blackgill Rockfish	S of 4010	2 (Year Based)	0.45 (0.151)	205	174.045	174.045	
Pacific Ocean Perch	S of 4010	3 (Year Based)	0.45 (0.222)				

Stock or Complex	Area	Cat.	P* (ABC Buffer)	OFL	ABC	ACL	Notes
Redbanded	S of 4010	3 (Year Based)	0.45 (0.222)	10.4057	8.0956	8.0956	
Rougheye/Blackspotted	S of 4010	2 (Year Based)	0.45 (0.182)	4.76	3.8937	3.8937	2% of the coastwide OFL is apportioned south of 40°10' N. lat. based on average landings during 1985-2012.
Sharpchin	S of 4010	2 (Year Based)	0.45 (0.182)	72.2144	59.0714	59.0714	20% of coastwide OFLs are apportioned S of 40°10' N lat.
Shortraker	S of 4010	3 (Year Based)	0.45 (0.222)	0.1049	0.0816	0.0816	
Yellowmouth	S of 4010	3 (Year Based)	0.45 (0.222)	0.8483	0.66	0.66	