

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE REPORT ON 2022 GROUND FISH  
 HARVEST IN CALIFORNIA

**Contents**

Recreational Fishery .....	1
Copper Rockfish .....	1
Quillback Rockfish .....	2
Yelloweye Rockfish.....	2
Non-Trawl Commercial Fishery (Deeper Nearshore).....	3
Copper Rockfish .....	3
Quillback Rockfish .....	4
Other Deeper Nearshore Rockfish .....	5
Appendix I .....	8

The California Department of Fish and Wildlife (CDFW) provides the following informational report on harvest of select groundfish species of interest in 2022; a more comprehensive reporting of inseason groundfish mortality in California is found in Appendix I. Based on the most recent catch information, CDFW does not propose any inseason changes.

**Recreational Fishery**

***Copper Rockfish***

The best estimate of total mortality for copper rockfish in the California recreational fishery through August 28, 2022 is 40.3 mt (Table 1), or 23 percent of the 2022 catch projection from the [November 2021 CDFW Inseason Report 2](#); this value incorporates monthly catch estimates from January through June, and weekly Anticipated Catch Value (ACV) data from July 1 through August 28. Implementation of the 1-fish sub-bag limit appears to be having the effect of reducing total mortality, as expected. Industry-initiated actions like avoiding areas where copper rockfish are commonly found are also likely contributing to the reduction. In 2023, copper rockfish will remain in the minor nearshore rockfish complex, north and south of 40°10' N. lat., with a species-specific ACT of 84.6 mt for south of 40° 10' N. lat., and 6.9 mt for the area between 42° - 40° 10' N. lat.

Table 1. Recreational best estimate of total mortality for copper rockfish off California by month and Management Area. Data by Management Area are monthly CRFS estimates. ACV data are statewide. As

CRFS estimates become available the ACV value for that month is removed. All data are from CDFW/CRFS, are preliminary and subject to change.

Month	Southern MA	Central MA	San Francisco MA	Mendocino MA	Northern MA	ACV (statewide)	Total
January	0.0	0.0	-	-	0.0	NA	0.1
February	0.0	0.0	-	-	0.0	NA	0.0
March	4.8	0.0	-	-	0.3	NA	5.1
April	0.7	0.4	0.5	0.0	0.0	NA	1.7
May	1.3	0.7	0.4	0.3	0.3	NA	2.9
June	1.6	3.2	1.6	1.0	0.9	NA	8.3
July						12.79	12.79
August (thru Aug 28)						9.42	9.42
<b>Total</b>	<b>8.4</b>	<b>4.3</b>	<b>2.5</b>	<b>1.3</b>	<b>1.5</b>	<b>22.2</b>	<b>40.3</b>

### ***Quillback Rockfish***

The best estimate of total mortality for quillback rockfish in the California recreational fishery through August 28, 2022 is 6.3 mt (Table 2), or 76 percent of the 2022 catch projection from the [November 2021 CDFW Inseason Report 2](#); this value incorporates monthly catch estimates from January through June, and weekly ACV data from July 1 through August 28. In 2023, quillback rockfish will remain in the minor nearshore complex north and south of 40°10' N. lat., with a species-specific ACT of 0.89 mt for south of 40°10' N. lat., and 0.87 mt for the area between 40° N. lat. and 40°10' N. lat.

Table 2. Recreational best estimate of total mortality for quillback rockfish off California by month and Management Area. Data by Management Area are monthly CRFS estimates. ACV data are statewide. As CRFS estimates become available the ACV value for that month is removed. All data are from CDFW/CRFS, are preliminary and subject to change.

Month	Southern MA	Central MA	San Francisco MA	Mendocino MA	Northern MA	ACV (statewide)	Total
January	-	-	-	-	-	NA	-
February	-	-	-	-	-	NA	-
March	-	-	-	-	-	NA	-
April	-	-	0.04	0.00	-	NA	0.0
May	-	-	0.02	0.06	0.14	NA	0.22
June	-	0.00	0.09	0.18	0.30	NA	0.58
July						2.91	2.91
August (thru Aug 28)						2.54	2.54
<b>Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.2</b>	<b>0.4</b>	<b>5.5</b>	<b>6.3</b>

### ***Yelloweye Rockfish***

Yelloweye rockfish is the only remaining rebuilding rockfish species off the coast of California. A California recreational harvest guideline (HG) is set at 11.7 mt, with an ACT of 9.2 mt in 2022. CDFW tracks recreational mortality of yelloweye rockfish on a weekly basis using the

established ACV process. Through August 28, 2022, it is projected that 2.5 mt of yelloweye rockfish mortality has occurred. CDFW does not anticipate the California recreational HG or ACT being reached or exceeded prior to the end of the year.

### Non-Trawl Commercial Fishery (Deeper Nearshore)

#### Copper Rockfish

Cumulative landings through August 31, 2022, in the area between 42 – 4010' N. lat. have reached the 2022 landings projection of 0.6 mt (Figure 1). Given weather and ocean conditions that typically occur in the fall and winter off the coast of Northern California, and the opening of Dungeness crab season, CDFW anticipates landings of copper rockfish to be less than 1 mt. Cumulative landings south of 4010' N. lat. are approximately 54 percent of the 2022 landings projection (Figure 2). Although 2022 discard mortality information is not yet available to estimate total mortality the sub-trip limits for copper rockfish also continue to suggest that they are effective in minimizing impacts, especially south of 4010' N. lat.

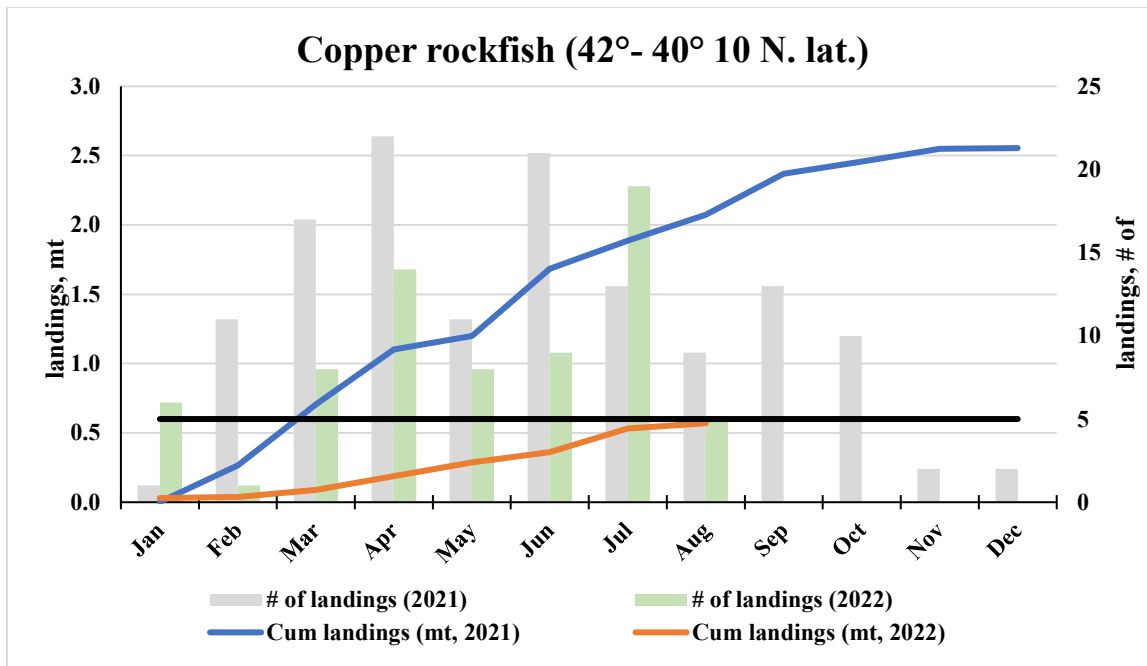


Figure 1. Copper rockfish cumulative commercial landings in 2021 (blue line) and 2022 (orange line) compared to the 2022 projected landing (black line), and number of landings in 2021 (gray bar) and 2022 (green bar) for the area between 42 – 4010' N. lat. Data are from PacFIN, are preliminary and subject to change.

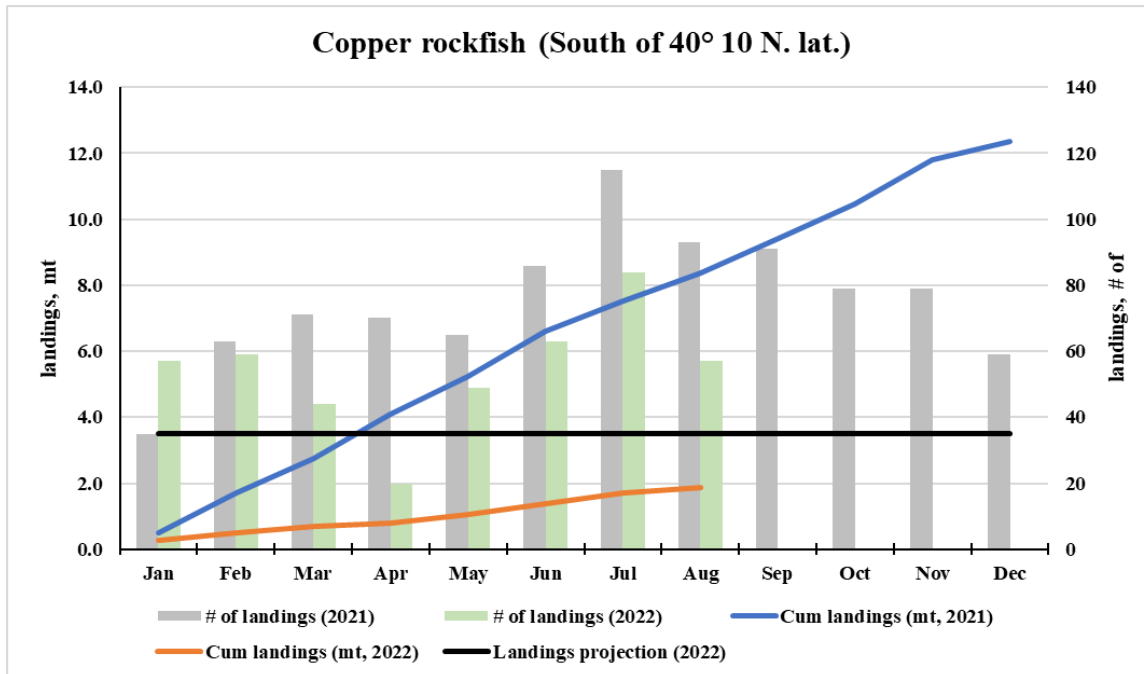


Figure 2. Copper rockfish cumulative commercial landings in 2021 (blue line) and 2022 (orange line) compared to the 2022 projected landing (black line), and number of landings in 2021 (gray bar) and 2022 (green bar) for south of 40° 10' N lat. Data are from PacFIN, are preliminary and subject to change.

### ***Quillback Rockfish***

Cumulative landings through August 31, 2022, for quillback rockfish in the California commercial nearshore fishery continues to track low compared to the expected catches set for 2022 under the reduced trip limits. For the area between 42°- 40° 10' N. lat., cumulative landings are approximately 50 percent of the landings projection, despite some increased effort (i.e., high number of landings in July, Figure 3). For south of 40° 10' N. lat., cumulative landings are approximately 36 percent of the landings projection (Figure 4). As noted above for copper rockfish, the 2022 discard mortality is not yet available; however, the sub-trip limits for quillback rockfish continue to suggest that they are effective in minimizing impacts on quillback rockfish.

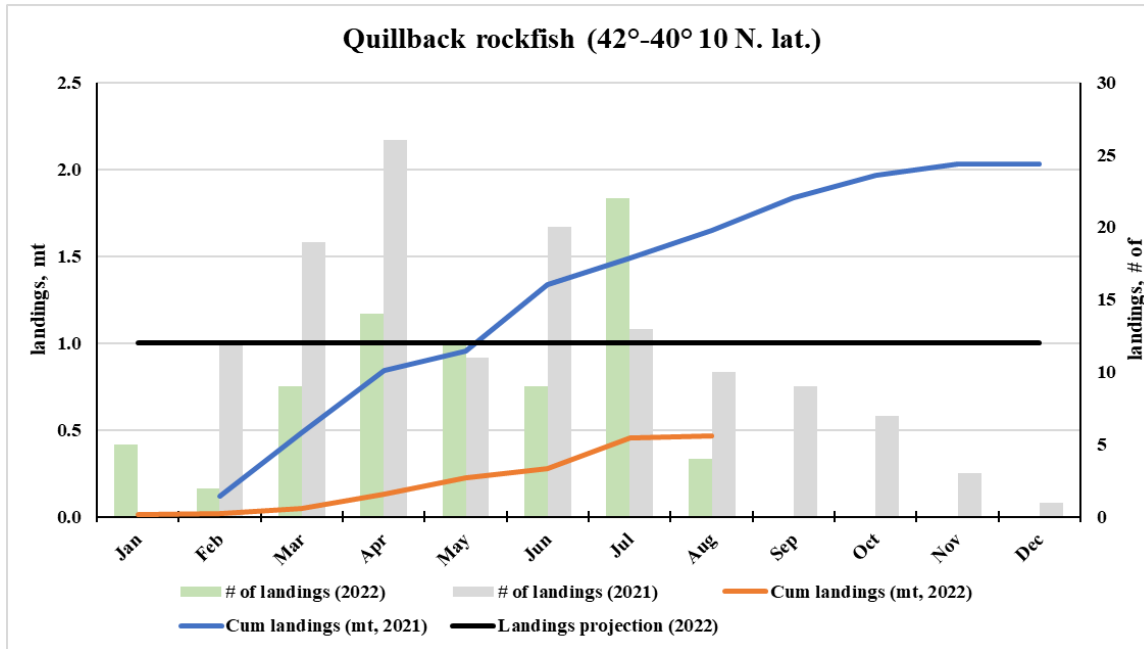


Figure 3. Quillback rockfish cumulative commercial landings in 2021 (blue line) and 2022 (orange line) compared to the 2022 projected landing (black line), and number of landings in 2021 (gray bar) and 2022 (green bar) for the area between 42 – 4010' N. lat. Data are from PacFIN, are preliminary and subject to change.

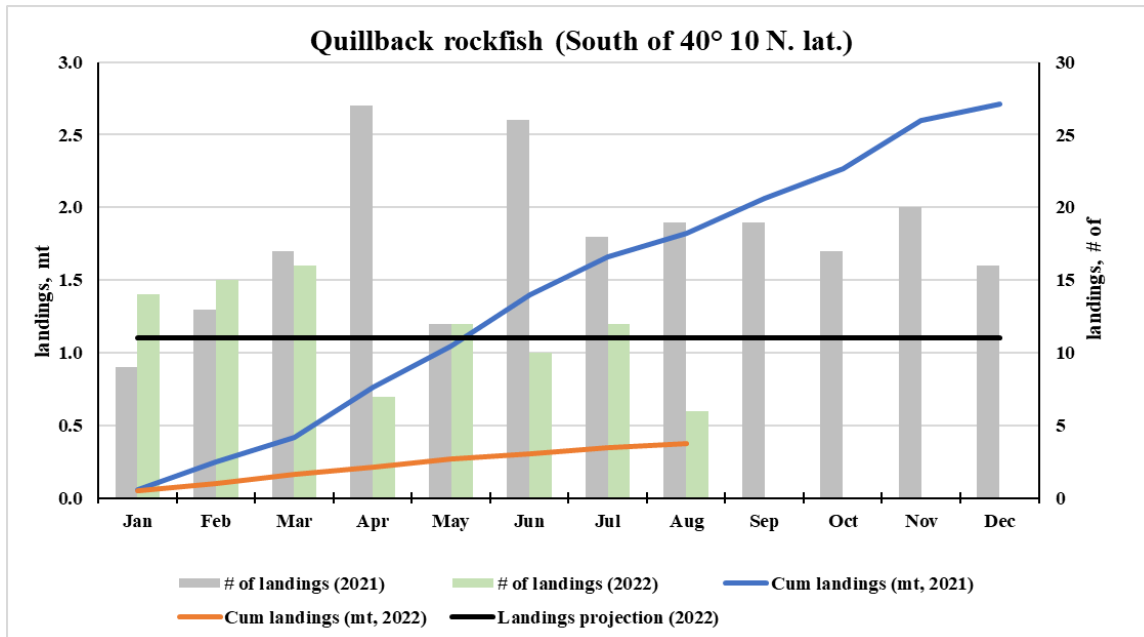


Figure 4. Quillback rockfish cumulative commercial landings in 2021 (blue line) and 2022 (orange line) compared to the 2022 projected landing (black line), and number of landings in 2021 (gray bar) and 2022 (green bar) for south for 40 10' N lat. Data are from PacFIN, are preliminary and subject to change.

***Other Deeper Nearshore Rockfish***

Cumulative landings through August 31, 2022, of the other deeper nearshore rockfish (i.e., black rockfish, blue rockfish, brown rockfish, calico rockfish, olive rockfish and treefish) have

increased and are tracking higher than in 2021, statewide (Figure 5 and Figure 6). Despite the constraining quillback rockfish and copper rockfish sub-trip limits, the trajectory of landings show the fishery can effectively target the other deeper nearshore rockfish while avoiding species of concern.

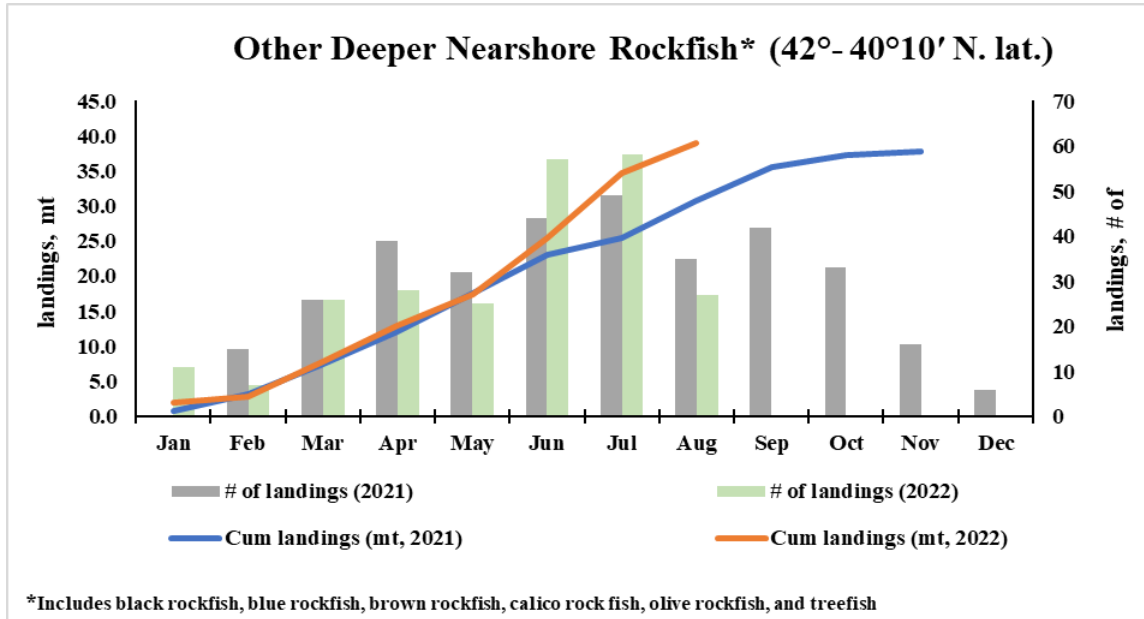


Figure 5. Other deeper nearshore rockfish cumulative commercial landings in 2021 (blue line) and 2022 (orange line) compared to the 2022 projected landing (black line), and number of landings in 2021 (gray bar) and 2022 (green bar) for the area between 42 – 4010' N. lat. Data are from PacFIN, are preliminary and subject to change.

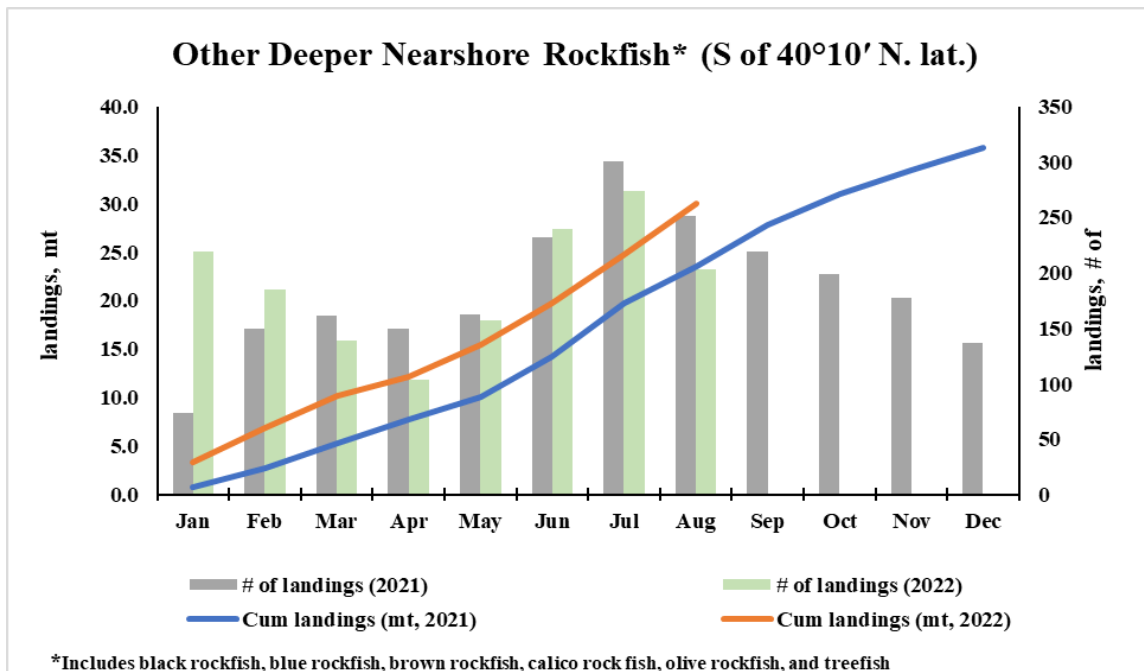


Figure 6. Other deeper nearshore rockfish cumulative commercial landings in 2021 (blue line) and 2022 (orange line) compared to the 2022 projected landing (black line), and number of landings in 2021 (gray bar) and 2022 (green bar) for the area south of 40°10' N. lat. Data are from PacFIN, are preliminary and subject to change.

bar) and 2022 (green bar) for south for 40 10' N lat. Data are from PacFIN, are preliminary and subject to change.

## **Appendix I**

This appendix provides an update on the status of the 2022 fishing season relative to Annual Catch Limits (ACLs), Harvest Guidelines (HGs), sector allocations, and Annual Catch Targets (ACTs) in effect for the 2021-22 biennium. Catch includes estimates of total mortality from the recreational sector, and landings from the commercial sector without discard mortality.

Commercial landings are from the non-trawl fixed gear limited entry and open access sectors, except for blackgill rockfish landings which both include trawl and non-trawl landings. The 2022 combined recreational and commercial catches are compared to federally designated harvest specifications (Table 3) and are within allowable levels.

Monthly recreational catch data are from RecFIN through June 2022 and reflect activity across all recreational management areas (Table 4). Commercial landings data are from PacFIN and reflect activity across all management areas from January through August (Table 5).



Table 3. Estimated take (mt) of select groundfish species in California for 2022 compared to the harvest limits for 2022.

Stock/Stock Complex	Reference Point	Recreational Mortality (mt)	Commercial Landings (mt)	Total (mt)	Tracking Limit	Percent Attainment
YELLOWEYE ROCKFISH	ACT (CA rec)	0.6	See Table 5	0.6	9.2	6.7%
CA Black rockfish	ACL	53.3	41.7	95.0	338.7	28.1%
Canary rockfish	HG (rec)	12.6	See Table 5	12.6	113.9	11.1%
Darkblotched rockfish	Non-Trawl Allocation	-	0.5	0.5	40.6	1.2%
Shortbelly rockfish	<sup>a</sup>	-	-	0.0	NA	-
Splitnose rockfish	Non-Trawl Allocation	-	0.0	0.0	80.6	0.0%
Widow rockfish	Non-Trawl Allocation	2.2	5.3	7.5	400	1.9%
Spiny dogfish	Non-Trawl Allocation	0.1	0.6	0.7	1,585.20	0.0%
Dover sole	Non-Trawl Allocation	-	0.4	0.4	2,420.10	0.0%
English sole	Non-Trawl Allocation	-	0.0	0.0	442.5	0.0%
Petrale sole	Non-Trawl Allocation	1.9	0.5	2.4	30	7.9%
Starry flounder	Non-Trawl Allocation	0.0	0.0	0.0	171.8	0.0%
Other flatfish	Non-Trawl Allocation	7.8	1.5	9.3	461.7	2.0%
CA Cabezon	ACL	9.3	21.0	30.3	195	15.5%
CA Kelp greenling	<sup>b</sup>	1.8	2.3	4.1	92.5	4.4%
Nearshore rockfish N. 42°- 40°10' N. lat. <sup>c</sup>	HG (CA Share) <sup>d</sup>	3.9	5.0	8.9	37.4	23.8%
Copper rockfish 42°- 40°10' N. lat.	ACL Contribution to Complex	1.5	0.5	2.0	2.0	98.0%
Quillback rockfish 42°- 40°10' N. lat.	ACL Contribution to Complex	0.4	0.5	0.9	1.6	58.6%
Shelf rockfish N. 40°10' N. lat.	Non-Trawl Allocation	1.1	1.7	2.8	548.3	0.5%
Yellowtail rockfish N. 40°10' N. lat.	ACL	0.3	4.5	4.8	575.2	0.8%
Slope rockfish N. 40°10' N. lat.	Non-Trawl Allocation	-	5.5	5.5	285.4	1.9%
Lingcod N. 40°10' N. lat.	Non-Trawl Allocation	8.9	12.8	21.7	2,573.80	0.8%
Nearshore rockfish S. 40°10' N. lat. <sup>c</sup>	ACL	102.0	60.2	162.2	1,010	16.1%
Copper rockfish S. 40°10' N. lat.	ACL Contribution to Complex	16.6	1.8	18.4	202	9.1%
Quillback rockfish S. 40°10' N. lat.	ACL Contribution to Complex	0.4	0.4	0.8	4.2	18.9%
CA scorpionfish	ACL	78.5	1.7	80.2	275	29.2%
Shelf rockfish S. 40°10' N. lat. <sup>c</sup>	Non-Trawl Allocation	106.4	75.4	181.8	1137.2	16.0%

Stock/Stock Complex	Reference Point	Recreational Mortality (mt)	Commercial Landings (mt)	Total (mt)	Tracking Limit	Percent Attainment
Vermilion rockfish S. 40°10' N. lat.	ACL Contribution to Complex	63.1	52.4	115.5	209.5	55.1%
Bocaccio S. 40°10' N. lat.	Non-Trawl Allocation	29.7	31.1	60.8	1,021.80	5.9%
Chilipepper S. 40°10' N. lat.	Non-Trawl Allocation	2.1	27.3	29.4	540.3	5.4%
Cowcod S. 40°10' N. lat.	Non-Trawl Allocation	0.4	See Table 5	0.4	16	2.2%
Slope rockfish S. 40°10' N. lat. <sup>f</sup>	Non-Trawl Allocation	0.3	2.7	3.0	142.2	2.1%
Blackgill rockfish S. 40°10' N. lat. <sup>g</sup>	HG	-	26.1	26.1	174	15.0%
Lingcod S. 40°10' N. lat.	Non-Trawl Allocation	31.7	21.1	52.8	695.4	7.6%
Sablefish N. 36° N. lat.	Non-Trawl Allocation	0.0	359.1	359.1	6,566	5.5%
Sablefish S. 36° N. lat.	Non-Trawl Allocation	1.0	108.3	109.3	1,809	6.0%
Longspine thornyhead N 34° 27' N. lat.	Non-Trawl Allocation	-	1.6	1.6	119.9	1.3%
Longspine thornyhead S 34° 27' N. lat.	ACL	-	4.1	4.1	774	0.5%
Shortspine thornyhead N 34° 27' N. lat.	Non-Trawl Allocation	-	12.8	12.8	65.73	19.5%
Shortspine thornyhead S 34° 27' N. lat.	Non-Trawl Allocation	-	23.2	23.2	680.3	3.4%

Note: 0.0 indicates trace take; a dash (-) indicates no take. Slight variations in totals or percentages reported are due to rounding.

a/ Shortbelly rockfish is an ecosystem component species and does not have a harvest limit

b/ Reference point denotes the CA kelp greenling contribution to the Other Fish complex ACL.

c/ Includes catch of copper rockfish and quillback rockfish

d/ The nearshore complex north of 40°10' N lat. HG is 77 mt. The CA share of the HG is 37.4 mt.

e/ Includes catch of vermilion rockfish

f/ Does not include blackgill rockfish landings south of 40°10' N. lat. due to a separate harvest limit from the slope rockfish complex south of 40°10' N. lat.

g/ Blackgill rockfish south of 40°10' N. lat. commercial landings include both trawl and non-trawl sectors

Table 4. Estimated catch (mt) of select groundfish species in the California recreational sector by month in 2022. Data are from RecFIN, are preliminary and subject to change.

Stock/Stock Complex <sup>1</sup>	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total
YELLOWEYE ROCKFISH	-	-	-	0.1	0.2	0.4							0.6
CA Black rockfish	0.3	0.3	0.1	1.7	16.1	34.9							53.3
Canary rockfish	-	-	0.1	1.9	2.8	7.8							12.6
Darkblotched rockfish	-	-	-	-	-	-							-
Shortbelly rockfish	-	-	-	-	-	-							-
Splitnose rockfish	-	-	-	-	-	-							-
Widow rockfish	-	-	1.9	0.1	0.2	0.1							2.2
Spiny dogfish	0.0	-	0.0	0.0	0.0	0.1							0.1
Dover sole	-	-	-	-	-	-							-
English sole	-	-	-	-	-	-							-
Petrale sole	0.1	0.4	0.1	0.1	0.0	1.2							1.9
Starry flounder	-	0.0	0.0	-	0.0	0.0							0.0
Other flatfish	0.6	2.2	2.0	0.7	0.4	1.9							7.8
CA Cabezon	0.0	1.3	1.2	1.2	2.1	3.5							9.3
CA Kelp greenling	0.1	0.4	0.1	0.5	0.2	0.5							1.8
Nearshore rockfish N. 42°- 40°10' N. lat. <sup>a</sup>	0.0	0.0	0.3	0.0	1.2	2.3							3.9
Copper rockfish 42°- 40°10' N. lat.	-	0.0	0.3	0.0	0.3	0.9							1.5
Quillback rockfish 42°- 40°10' N. lat.	-	-	-	-	0.1	0.3							0.4
Shelf rockfish N. 40°10' N. lat.	-	-	-	0.0	0.4	0.7							1.1
Yellowtail rockfish N. 40°10' N. lat.	-	-	-	-	0.0	0.3							0.3
Slope rockfish N. 40°10' N. lat.	-	-	-	-	-	-							-
Lingcod N. 40°10' N. lat.	-	0.1	0.1	0.2	3.0	5.4							8.9
Nearshore rockfish S. 40°10' N. lat. <sup>a</sup>	0.2	0.7	9.3	18.1	24.1	49.7							102.0
Copper rockfish S. 40°10' N. lat.	0.0	0.0	4.7	1.7	2.7	7.4							16.6
Quillback rockfish S. 40°10' N. lat.	-	-	-	0.0	0.1	0.3							0.4
CA scorpionfish	4.9	6.0	5.3	7.2	14.2	40.9							78.5
Shelf rockfish S. 40°10' N. lat. <sup>b</sup>	0.0	0.1	20.0	27.4	25.4	33.5							106.4

<b>Stock/Stock Complex<sup>1</sup></b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>July</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Total</b>
Vermilion rockfish S. 40°10' N. lat.	0.0	0.1	12.1	17.8	13.6	19.6							63.1
Bocaccio S. 40°10' N. lat.	-	0.0	4.5	7.0	6.1	12.1							29.7
Chilipepper S. 40°10' N. lat.	0.0	-	0.6	0.3	0.2	1.0							2.1
Cowcod S. 40°10' N. lat.	-	-	0.4	0.0	0.0	0.0							0.4
Slope rockfish S. 40°10' N. lat. °	-	-	0.1	0.2	-	-							0.3
Lingcod S. 40°10' N. lat.	0.2	0.3	1.6	5.0	9.6	15.0							31.7
Sablefish N. 36° N. lat.	0.0	-	0.0	-	0.0	0.0							0.0
Sablefish S. 36° N. lat.	-	-	0.0	-	1.0	0.0							1.0
Longspine thornyhead N 34° 27' N. lat.	-	-	-	-	-	-							-
Longspine thornyhead S 34° 27' N. lat.	-	-	-	-	-	-							-
Shortspine thornyhead N 34° 27' N. lat.	-	-	-	-	-	-							-
Shortspine thornyhead S 34° 27' N. lat.	-	-	-	-	-	-							-

Note: 0.0 indicates trace mortality; a dash (-) indicates no mortality. Slight variations in totals reported are due to rounding.

1/ See rockfish stock complex definitions under Table 1.

a/ Includes catch of copper rockfish and quillback rockfish.

b/ Includes catch of vermilion rockfish.

c/ Does not include catch of blackgill rockfish south of 40°10' N. lat. due to a separate harvest limit from the slope rockfish complex south of 40°10' N. lat.

Table 5. Estimated landings (mt) of select groundfish species in California commercial non-trawl fixed gear limited entry and open access sectors, except for blackgill rockfish landings which include trawl and non-trawl, by month in 2022. Data are from PacFIN, are preliminary and subject to change.

Stock/Stock Complex <sup>1</sup>	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total
YELLOWEYE ROCKFISH	-	-	-	-	-	-	-	-					-
CA Black rockfish	2.2	1.2	5.3	5.3	4.7	8.1	9.6	5.3					41.7
Canary rockfish	1.6	2.4	1.7	1.0	1.2	2.1	2.0	1.6					13.6
Darkblotched rockfish	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.1					0.5
Shortbelly rockfish	-	-	-	-	-	-	-	-					-
Splitnose rockfish	--	0.0	0.0	0.0	0.0	--	0.0	0.0					0.0
Widow rockfish	0.8	0.6	0.4	0.4	0.7	0.8	0.9	0.7					5.3
Spiny dogfish	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.1					0.6
Dover sole	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2					0.4
English sole	-	-	-	-	-	-	-	0.0					0.0
Petrale sole	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.2					0.5
Starry flounder	-	0.0	-	-	-	-	0.0	0.0					0.0
Other flatfish	-	0.0	0.1	0.3	0.2	0.4	0.3	0.2					1.5
CA Cabezon	3.3	1.8	1.0	1.1	2.0	4.1	4.8	2.9					21.0
CA Kelp greenling	0.4	0.3	0.2	0.2	0.2	0.5	0.3	0.2					2.3
Nearshore rockfish N. 42°- 40°10' N. lat. <sup>a</sup>	0.5	0.2	0.5	0.5	0.4	1.4	1.1	0.4					5.0
Copper rockfish 42°- 40°10' N. lat.	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0					0.5
Quillback rockfish 42°- 40°10' N. lat.	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0					0.5
Shelf rockfish N. 40°10' N. lat.	0.2	0.1	0.2	0.1	0.1	0.4	0.4	0.2					1.7
Yellowtail rockfish N. 40°10' N. lat.	0.4	0.3	0.2	0.4	0.3	1.0	1.0	0.9					4.5
Slope rockfish N. 40°10' N. lat.	-	0.1	0.5	0.2	0.0	2.2	1.6	0.9					5.5
Lingcod N. 40°10' N. lat.	1.6	1.0	1.2	1.2	1.0	2.4	2.4	2.0					12.8
Nearshore rockfish S. 40°10' N. lat. <sup>a</sup>	7.5	6.6	4.8	3.0	5.7	10.1	11.9	10.6					60.2
Copper rockfish S. 40°10' N. lat.	0.2	0.2	0.2	0.1	0.3	0.3	0.3	0.2					1.8
Quillback rockfish S. 40°10' N. lat.	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0					0.4
CA scorpionfish	0.0	0.0	0.0	0.2	0.3	0.5	0.4	0.3					1.7

Stock/Stock Complex <sup>1</sup>	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total
Shelf rockfish S. 40°10' N. lat. <sup>b</sup>	9.5	8.8	6.7	7.4	11.3	11.3	9.4	11.0					75.4
Vermilion rockfish S. 40°10' N. lat.	6.3	5.9	4.5	5.1	8.4	7.9	6.7	7.6					52.4
Bocaccio S. 40°10' N. lat.	5.7	4.8	1.9	3.0	3.7	4.3	3.6	4.1					31.1
Chilipepper S. 40°10' N. lat.	6.0	2.4	2.7	1.6	3.1	4.6	3.8	3.1					27.3
Cowcod S. 40°10' N. lat.	-	-	-	-	-	-	-	-					-
Slope rockfish S. 40°10' N. lat. <sup>c</sup>	0.6	0.5	0.1	0.3	0.3	0.4	0.2	0.3					2.7
Blackgill rockfish S. 40°10' N. lat. <sup>d</sup>	7.6	3.3	3.6	1.4	1.3	2.8	1.9	4.2					26.1
Lingcod S. 40°10' N. lat.	4.2	2.6	1.6	1.2	2.1	3.1	3.3	3.0					21.1
Sablefish N. 36° N. lat.	34.2	25.7	34.9	46.8	39.5	60.8	59.2	58.0					359.1
Sablefish S. 36° N. lat.	21.0	18.8	10.4	10.5	15.2	13.9	9.2	9.3					108.3
Longspine thornyhead N 34° 27' N. lat.	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2					1.6
Longspine thornyhead S 34° 27' N. lat.	0.7	0.3	0.5	0.5	0.7	0.6	0.5	0.3					4.1
Shortspine thornyhead N 34° 27' N. lat.	2.1	1.5	1.8	1.3	1.2	1.4	2.4	1.1					12.8
Shortspine thornyhead S 34° 27' N. lat.	4.4	3.9	3.7	2.1	2.9	2.6	1.5	2.1					23.2

Landing estimates do not include discard mortality. 0.0 indicates trace landings; a dash (-) indicates no landings.

Note: Slight variations in totals reported are due to rounding.

1/ See rockfish stock complex definitions under Table 1.

a/ Includes landings of copper rockfish and quillback rockfish.

b/ Includes landings of vermilion rockfish.

c/ Does not include landings of blackgill rockfish south of 40°10' N. lat. due to a separate harvest limit from the slope rockfish complex south of 40°10' N. lat.

d/ Blackgill rockfish south of 40°10' N. lat. landings include both trawl and non-trawl sector.