

REALLOCATION OF BLACKGILL ROCKFISH SOUTH OF 40°10' N LATITUDE

Introduction

This document provides background information and a summary of data to inform Council decision-making on reallocation of blackgill rockfish (south of 40°10' N. latitude) between trawl and non-trawl sectors. Reallocation of blackgill rockfish was a California Department of Fish and Wildlife and industry-recommended priority at the September 2014 meeting given its importance to southern California non-trawl fleets. Reallocating blackgill rockfish would require removing it from the Slope Rockfish complex south of 40°10' N. latitude and issuing stock-specific specifications (overfishing limits, acceptable biological catches, and annual catch limits). This action would require an amendment to the Pacific Coast Groundfish Fishery Management Plan. The Council may also want to consider whether the current Amendment 21 allocation for the Slope Rockfish complex should be re-evaluated as a result of removing blackgill rockfish.

Background

Long-term formal allocations were made under Amendment 21 to support the Amendment 20 trawl rationalization program (hereafter referred to as the individual fishing quota (IFQ) program). These formal allocations were made to provide more certainty to the various sectors by reducing the risk that the actions of one sector might negatively impact the others. Providing for this certainty was important for the IFQ program because it enabled fishery participants to make long range planning decisions based on the allocation of harvest privileges. Long-term formal allocations were made for trawl-dominant stocks/complexes and some stocks utilized by many sectors (e.g., lingcod).

Blackgill rockfish was one of many species formally allocated under Amendment 21. Blackgill, a slope rockfish species, was allocated within the slope rockfish complexes north and south of 40°10' N. latitude based on the average 2003-2005 sector total catch percentage¹. The trawl and non-trawl sectors were allocated 63 percent and 37 percent of the slope rockfish fishery harvest guideline south of 40°10' N. latitude, respectively. Although blackgill rockfish was historically targeted by the non-trawl sector, it was allocated according to the Amendment 21 allocations because it is managed within the slope rockfish complex.

Management History

The Slope Rockfish complex south of 40°10' N. latitude is composed of the following species: aurora rockfish (*Sebastes aurora*), bank rockfish (*S. rufus*), blackgill rockfish (*S. melanostomus*), blackspotted rockfish (*S. melanostictus*), Pacific ocean perch (*S. alutus*), redbanded rockfish (*S. babcocki*), roughey rockfish (*S. aleutianus*), sharpchin rockfish (*S. zacentrus*), shorttraker rockfish (*S. borealis*), and yellowmouth rockfish (*S. reedi*).

Historically, management of slope rockfish has generally not been to the species level, but rather as a part of the “Sebastes complex”. In 2000, the “Sebastes complex” was split into slope, shelf, and nearshore complexes which were stratified north and south of 40°10' N. latitude (SAFE

¹ Other alternatives considered under Amendment 21 included: 1995-2005 sector landed catch percentage and 2003 to 2005 sector total catch percentages with 10% higher non-trawl allocation for select species.

document: Status of the Pacific Coast Groundfish Fishery through 2000 and Recommended Acceptable Biological Catches for 2001, http://www.pcouncil.org/wp-content/uploads/SAFE_October_2000.pdf. Annual catch limits were established for the slope rockfish complexes starting in 2005 (Table 1).

Slope rockfish were managed under bi-monthly trip limits for both the trawl and non-trawl sectors. Trip limits were set at the complex level and the entire trip limit could have been comprised of a single species.

The IFQ program was implemented in 2011. This changed how the trawl fishery operated by allowing participants the flexibility to decide how and when to fish. The gear switching provision under this program also allowed species taken with IFQ to be caught using non-trawl gears. Bi-monthly cumulative limits remain in effect for the commercial non-trawl sectors. Recreational regulations provide for a 10-fish bag limit.

In 2013, a harvest guideline for blackgill rockfish south of 40°10' N. latitude was implemented in response to new stock assessment results which indicated the stock was in the precautionary zone and reductions to harvest levels were needed (see stock status and current management).

Table 1. Optimum yields, annual catch limits and harvest guideline (mt) for the Slope Rockfish complex and blackgill rockfish south of 40°10' N. latitude, 2005-2013.

Stock	2005 OY	2006 OY	2007 OY	2008 OY	2009 OY	2010 OY	2011 ACL	2012 ACL	2013 ACL/HG
Slope Rockfish	639	639	626	626	626	626	626	626	618
Blackgill Rockfish									106

Stock Status

With the exception of bank rockfish, which was assessed in 2000 (Piner et al. 2000), blackgill rockfish, which was last assessed in 2011 (Field and Pearson 2011), and rougeye rockfish, which was assessed in 2013, none of the southern slope rockfish stocks have been assessed. The most recent blackgill rockfish stock assessment, conducted for the stock south of 40°10' N. latitude (Field and Pearson 2011) estimated that it was below target with a depletion of 30 percent of unfished biomass at the start of 2011, which places this stock in the precautionary zone.

Given the change in the perception of stock status and the need to reduce mortality, the Council recommended to continue managing this stock within the southern Slope Rockfish complex and established a harvest guideline in 2013 reflecting the recent stock assessment results (Table 1). A sorting requirement was also implemented at the same time to improve inseason tracking of blackgill rockfish in all sectors.

Current Management

Although blackgill rockfish is managed within the slope rockfish complex, it must be individually sorted and total mortality is counted against its harvest guideline. In 2013, management measures were implemented in the non-trawl sector to ensure that mortality remains within allowable levels informed by the recent stock assessment.

In the non-trawl sector, a blackgill rockfish specific sub-trip limit was implemented in the limited entry and open access sectors within the aggregate slope rockfish bi-monthly limits. The intent of the sub-trip limits was to reduce targeting and keep mortality within the non-trawl allocation. Although blackgill rockfish had been a target for the non-trawl sector, low landings indicate that targeting has essentially been eliminated due to the reduced sub-trip limits.

In the IFQ fishery, landings and discards of blackgill rockfish are counted against the southern slope rockfish quota². Because blackgill rockfish does not have its own quota, it is difficult to eliminate targeting. Any changes to management measures to reduce targeting of blackgill rockfish in the IFQ fishery under the current management framework would have to be applied to all sectors and would severely disrupt fishing for all sectors. For example, if one wanted to reduce blackgill targeting by the trawl sector under the current management framework, either the southern Slope Rockfish complex ACL would have to be significantly reduced and/or the trawl and non-trawl RCAs may need to extend much further offshore (blackgill are found in depths greater than 250 fm and are one of the deepest rockfish). Given the inability to effectively reduce targeting and to avoid unnecessary disruptions to the trawl sector, management measures have not been implemented in the IFQ fishery for blackgill rockfish. Recent landings data indicate that targeting still continues in this sector.

Summary of Data

The data considered under Amendment 21 has been updated with recent years' catches by sector and included within this summary to facilitate Council discussions and future deliberations. For the purposes of this analysis the trawl sector catches include landings taken with a limited entry trawl permit (including those taken in the IFQ fishery under gear switching); the non-trawl sector catches include landings made by limited entry and open access fixed gear fleets using hook-and-line, traps, gillnet, etc. Because many slope rockfish reside outside the allowable depths for the recreational sector, take of these species is minimal and therefore not included in this summary.

Between 1995 and 2013, vessels in the non-trawl sector accounted for 55.5 percent of the blackgill rockfish landings (Table 2). After implementation of the IFQ program, the non-trawl sector accounted for 62.8 percent of blackgill landings. Implementation of the harvest guideline in 2013 accounted for the steep decline in non-trawl landings. Had Amendment 21 criteria (2003-2005) been applied to blackgill rockfish separately at the time, the trawl sector would have received 43.7 percent; the non-trawl sector, 56.3 percent.

² IFQ can only be issued based on an ACL, not a harvest guideline.

Table 2. Landings of blackgill rockfish (south of 40°10' N. latitude) by sector and year, 1995-2013. Shaded cells represent post trawl rationalization years. (Note: 1995-2001 and 2013 are PacFIN data (table vdrfd) and 2002-2012 are WCGOP data; Data sources: PacFIN extract on 10/6/2014, WCGOP from GMMultiYr_DataProduct_122313_wPivotTables_Final.xlsx).

Year	Trawl	Non-trawl	Total
1995	128.4	218.9	347.3
1996	152.7	210.9	363.6
1997	130.2	139.6	269.8
1998	114.7	113.1	227.8
1999	27.6	24.2	51.8
2000	53.2	32.9	86.1
2001	90.1	39.3	129.4
2002	61.7	77.9	139.5
2003	54.4	133.8	188.2
2004	79.2	70.4	149.6
2005	51.5	36.1	87.5
2006	35.7	57.4	93.1
2007	25.5	22.2	47.7
2008	37.5	36.2	73.7
2009	53.2	80.2	133.4
2010	61.2	90.1	151.2
2011	15.9	131.2	147.1
2012	78.8	112.4	191.2
2013	54.7	18.3	73.0
Total	1,306.1	1,645.2	2,951.3

Between 1995 and 2013, vessels in the trawl sector accounted for 87.1 percent of the slope rockfish landings if blackgill catches were excluded (Table 3). After implementation of the IFQ program, the trawl sector accounted for 81.9 percent of slope rockfish landings. If the years used in Amendment 21 (2003-2005) had been applied to slope rockfish with blackgill rockfish removed, the trawl sector would have received 83.0 percent; the non-trawl sector, 17.0 percent.

Table 3. Landings of slope rockfish excluding blackgill (south of 40°10' N. latitude) by sector and year, 1995-2013. Shaded cells represent years post trawl rationalization program. (Note: 1995-2001 and 2013 are PacFIN data (table vdrfd) and 2002-2012 are WCGOP data; Data sources: PacFIN extract on 10/6/2014, WCGOP from GMMultiYr_DataProduct_122313_wPivotTables_Final.xlsx).

Year	Trawl	Non-trawl	Total
1995	483.4	115.6	599.0
1996	645.7	51.6	697.3
1997	784.3	45.4	829.7
1998	608.2	162.8	771.0
1999	68.8	10.3	79.1
2000	134.5	21.6	156.1
2001	154.8	21.2	176.0
2002	281.4	49.9	331.2
2003	129.1	27.2	156.4
2004	157.0	31.2	188.2
2005	59.3	20.8	80.2
2006	54.7	24.2	78.9
2007	55.0	13.4	68.3
2008	99.6	4.7	104.3
2009	68.1	12.7	80.9
2010	18.1	3.3	21.4
2011	35.2	3.8	39.0
2012	39.7	14.3	54.0
2013	54.9	11.6	66.5
Total	3,931.8	645.6	4,577.4

Table 4 summarizes landings of individual species in the southern Slope Rockfish complex for the period 1995 through 2013. During this time slope rockfish landings were dominated by two species: bank and blackgill rockfish (39.9 percent and 38.2 percent, respectively). The top species landed in this complex were bank rockfish, blackgill rockfish, darkblotched rockfish, and aurora rockfish. These species, with the exception of blackgill rockfish, are primarily caught using trawl gear. Blackgill rockfish are the most significant target species for the non-trawl sectors of those managed in the southern Slope Rockfish complex.

Table 4. Summary of sector landings for species comprising the southern Slope Rockfish complex compared to total southern Slope Rockfish complex landings from 1995-2013. (Note: Data are combined: 1995-2001 and 2013 from PacFIN (table vdrfd) and 2002-2012 from WCGOP; Data sources: PacFIN extract on 10/6/2014, WCGOP from GMMultiYr_DataProduct_122313_wPivotTables_Final.xlsx).

Species	Trawl	Non-trawl	Total	% trawl	% Non-trawl	% Total Slope
Aurora rockfish	423.9	22.4	446.3	95.0%	5.0%	5.9%
Bank rockfish	2,579.5	465.7	3,045.2	84.7%	15.3%	40.5%
Blackgill rockfish	1,306.1	1,637.7	2,943.9	44.4%	55.6%	39.1%
Blackspotted rockfish	0.1	9.1	9.2	0.6%	99.4%	0.1%
Darkblotched rockfish	724.6	15.5	740.1	97.9%	2.1%	9.8%
Pacific ocean perch	15.8	0.9	16.7	94.7%	5.3%	0.2%
Redbanded rockfish	13.5	12.0	25.5	53.0%	47.0%	0.3%
Rougeye rockfish	3.7	16.6	20.3	18.1%	81.9%	0.3%
Sharpchin rockfish	136.8	1.3	138.2	99.1%	0.9%	1.8%
Shorthead rockfish	8.5	0.4	8.9	95.4%	4.6%	0.1%
Yellowmouth rockfish	0.7	0.1	0.8	87.5%	12.5%	0.0%
Unspecified slope rockfish	47.8	78.2	126.1	38.0%	62.0%	1.7%
	5,261.0	2,260.0	7,521.0			100.0%

* Unspecified slope rockfish groups are combined and represent unsampled landings; species composition adjustments have not been applied.

The following tables summarize landings and discards by sector for blackgill rockfish and the slope rockfish complex of 40°10' N. latitude, from 2002 to 2013 (Table 5 and Table 6).

West Coast Groundfish Observer Program data indicate that landings of blackgill rockfish have been variable in both sectors over the years (Table 5). In the non-trawl sector, landings range from 21.7 mt to 129.2 mt; in the trawl sector, they range from 14.2 mt to 79.2 mt. After implementation of the IFQ program, landings increased in the non-trawl sector to some of the highest during that entire time period. During that same time landings in the trawl sector decreased and then increased somewhat but were still less than the non-trawl sector. Discards in the non-trawl sector were relatively low for all years (3.3 percent; Table 6); after IFQ implementation discards increased slightly to 6 percent. Discards in the trawl sector have been low, approximately two percent for all years); after IFQ implementation, discards were less than one percent.

Similar to blackgill rockfish, slope rockfish landings have also been variable in both sectors (Table 5). In the non-trawl sector, landings were low and ranged from 3.1 mt to 12.9 mt; trawl sector landings were more variable and ranged from 18.1 mt to 281.4 mt. After implementation of the IFQ program, landings in both sectors remained low. Discards in the non-trawl sector decreased slightly after implementation of the IFQ program, from 12.6 percent to 11.8 percent (Table 6). In the trawl sector, discards were reduced in half after implementation of the IFQ program (14.1 percent versus 6.0 percent).

Table 5. Summary of landings (mt) by sector for blackgill rockfish and the Slope Rockfish complex south of 40°10' N. latitude, from 2002 to 2013 (source: West Coast Groundfish Observer Program).

Blackgill rockfish												
Year	Non-Tribal at-sea hake	Non-Tribal shoreside hake	Non-Tribal IFQ trawl	Non-Tribal IFQ fixed gear	Non-nearshore fixed gear	Nearshore fixed gear	CA halibut	Pink shrimp	Incidental fisheries	CA rec	Research	Estimated landings mortality
2012			73.0	5.8	104.3	2.3						185.4
2011			14.2	1.7	129.2	0.4						145.5
2010			61.2		83.9	0.5			5.6			151.2
2009			53.2		77.2	2.4			0.5			133.4
2008			37.5		32.8	0.4			3.1			73.7
2007			25.5		21.7	0.3			0.2			47.7
2006		0.0	35.7		52.4	3.8			1.2			93.1
2005			51.5		33.7	2.0			0.3			87.5
2004			79.2		65.4	3.2			1.9			149.6
2003			54.4		119.8	4.1			9.9			188.2
2002		0.0	61.7		72.3	4.4	0.0	0.0	1.2			139.5
Southern Slope Rockfish complex (excludes blackgill rockfish)												
Year	Non-Tribal at-sea hake	Non-Tribal shoreside	Non-Tribal IFQ trawl	Non-Tribal IFQ fixed gear	Non-nearshore fixed gear	Nearshore fixed gear	CA halibut	Pink shrimp	Incidental fisheries	CA rec	Research	Estimated landings mortality
2012			39.5	0.2	12.9	0.1			1.1			53.8
2011			34.8	0.3	3.4	0.0			0.1			38.6
2010			18.1		3.1	0.0		0.0	0.2			21.4
2009			68.1		12.4	0.0	0.0	0.0	0.3			80.9
2008			99.6		3.5	0.1			1.1			104.3
2007			55.0		5.6	0.2			7.5			68.3
2006			54.7		7.4	0.6			16.2			78.9
2005		0.4	59.3		9.0	0.5		0.0	10.9			80.2
2004			157.0		10.9	0.5		0.0	19.8			188.2
2003			129.1		11.0	0.1		0.1	16.0			156.4
2002		22.7	281.4		7.1	0.9	0.0	0.2	19.0			331.2

Table 6. Summary of discards (mt) by sector for blackgill rockfish and the Slope Rockfish complex south of 40°10' N. latitude, from 2002 to 2013 (source: West Coast Groundfish Observer Program).

Blackgill rockfish

Year	Non-Tribal at-sea hake	Non-Tribal shoreside hake	Non-Tribal IFQ trawl	Non-Tribal IFQ fixed gear	Non-nearshore fixed gear	Nearshore fixed gear	CA halibut	Pink shrimp	Incidental fisheries	CA rec	Research	Estimated discard mortality
2012			0.1	0.2	9.4							9.8
2011			0.0	0.0	5.6							5.7
2010			0.0		0.9							0.9
2009			0.1		1.8							2.0
2008			0.1		0.6							0.6
2007			0.2		0.5							0.6
2006			0.5		1.6							2.1
2005			0.7		0.2							0.8
2004			1.2		2.1							3.4
2003			0.3		4.2							4.5
2002			9.8		0.5							10.3

Southern Slope Rockfish complex (excludes blackgill rockfish)

Year	Non-Tribal at-sea hake	Non-Tribal shoreside hake	Non-Tribal IFQ trawl	Non-Tribal IFQ fixed gear	Non-nearshore fixed gear	Nearshore fixed gear	CA halibut	Pink shrimp	Incidental fisheries	CA rec	Research	Estimated discard mortality
2012		0.2	3.8	0.0	1.4							5.5
2011			0.9	0.0	0.8							1.7
2010			2.5		0.0			0.0				2.6
2009			15.4		0.5			0.0				15.9
2008			5.8		0.5							6.3
2007			11.7		0.4							12.1
2006			72.6		0.8							73.5
2005			12.7		0.6			0.0				13.3
2004			9.4		1.3			0.1				10.7
2003			7.1		1.2			0.0				8.3
2002			21.9		5.1			0.0				27.0

Possible Range of Alternatives

Table 7 provides strawman alternatives which could help inform a possible range of alternatives for Council consideration. Alternatives could include allocating blackgill rockfish and the remaining southern Slope Rockfish complex using the same methodology as was used to decide Amendment 21 allocations (2003-2005 sector total catch percentage), a recent time frame such as post-IFQ implementation (2011-2013) or some combination of historical and recent time periods. The complexity and workload associated with this analysis would depend in part on the range of alternatives for analysis, including whether to only reallocate blackgill rockfish or whether to include the remaining southern Slope Rockfish complex as well.

Table 7. Strawman alternatives for allocation of blackgill rockfish and slope rockfish south of 40°10' N. latitude.

Alternatives	Blackgill Rockfish		Slope Rockfish	
	Trawl	Non-Trawl	Trawl	Non-Trawl
No Action	63% trawl: 37% non-trawl			
Am-21 years (2003-2005)	43.7%	56.3%	83.0%	17.0%
Post IFQ (2011-2013)	37.2%	62.8%	81.9%	18.1%
Am 21+Post IFQ (03-05,11-13)	40.6%	59.4%	82.7%	17.3%

Future Considerations/Next steps:

When identifying a process and timeline for moving forward, it will be important to consider the tradeoffs and implications on the 2017-2018 harvest specifications and management process. Completing final action on blackgill reallocation prior to beginning that process would likely be beneficial. It would reduce the complexity of the analyses and facilitate more efficient decision-making in the 2017-2018 specifications process.

While not specifically addressed in this report, other issues related to reallocation could also be explored.

Literature Cited

Field, J. C. and D. Pearson. 2011. Status of the blackgill rockfish, *Sebastes melanostomus*, in the Conception and Monterey INPFC areas for 2011. Groundfish Analysis Team Fisheries Ecology Division, Southwest Fisheries Science Center, Santa Cruz (CA).

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