NATIONAL MARINE FISHERIES SERVICE REPORT ON
UPDATES TO BLACKGILL -SLOPE ROCKFISH COMPLEX REALLOCATION AND ACCUMULATION LIMITS
(AMENDMENT 26)

In November 2018, the Pacific Fishery Management Council (Council) removed alternatives regarding blackgill rockfish annual vessel Quota Pound (QP) limits from the trawl catch share review follow-on package and scheduled final action for the April 2019 Council meeting. Given the delay in implementing Amendment 26 to the Pacific Coast Groundfish Fishery Management Plan, and the interconnectedness of the Council's consideration of blackgill rockfish annual vessel QP limits, the National Marine Fisheries Service (NMFS) plans to include the annual vessel QP limit action in the Amendment 26 rulemaking package. NMFS offers the following summary and updates regarding Amendment 26 to support Council decision.

Summary of Amendment 26 Alternatives

The Council took final action in November 2015 on Amendment 26 to remove blackgill rockfish from the Minor Slope Rockfish complex south of 40°10' N latitude (complex) and reallocate blackgill rockfish and the remaining species in the complex to trawl and non-trawl sectors.

The allocations under the Council's final preferred alternative (FPA) are 91 percent of the fishery harvest guideline (HG) for southern Slope Rockfish complex minus blackgill rockfish to limited entry (LE) trawl sectors and 9 percent of the fishery HG to non-trawl sectors. The blackgill rockfish fishery HG would be allocated 41 percent to LE trawl sectors and 59 percent to non-trawl sectors.

Table 1. Summary of Amendment 26 allocation alternatives from November 2015 Council Meeting.
Source: Agenda Item G.4, Attachment 1, April 2019

Alternative	Blackgill Removed from Complex?	Allocation Basis	Slope Rockfish S		Blackgill Rockfish S	
			LE Trawl Alloc. %	Non-Trawl Alloc. %	LE Trawl Alloc. %	Non-Trawl Alloc. %
No Action	N	A21 - 2003-2005 Total Catch	63.0%	37.0%	NA	NA
Alt. 1 (FPA)	Y	2003-2013 Total Catch	91.0%	9.0%	41.0%	59.0%
Alt. 2	Y	2011-2013 Total Catch	86.5%	13.5%	35.6%	64.4%

Under the November 2015 Council action, both blackgill rockfish and the southern Slope Rockfish complex would continue to carry Quota Share (QS) limits of 6 percent and annual vessel QP limits of 9 percent. Changes to all annual vessel QP limits (including Minor Slope Rockfish complex south of 40°10' N latitude) were initially considered as part of the follow-on actions. A preliminary analysis was conducted, but only alternatives for changing the blackgill rockfish annual vessel QP limit were developed and moved forward as a range of alternatives for full analysis.

The southern Slope Rockfish complex annual QP limits shown under the Amendment 26 analysis do not seem to be constraining for 2020. If the Council wants to consider alternative southern Slope Rockfish complex annual vessel QP limits, we recommend analyzing these limits during development of 2021-2022 biennial harvest specifications.

Table 2. Alternatives for blackgill rockfish annual vessel QP limit changes. Source: Agenda Item G.4, Attachment 2, April 2019

Alternative	Annual Vessel QP Limit
Alternative 1 (No Action)	9 percent
Alternative 2	12 percent
Alternative 3 (PPA)	20 percent
Alternative 4	30 percent

Overview of Analysis

Our analysis focuses on the biological and socioeconomic impacts of removing blackgill rockfish from the southern Slope Rockfish complex to support the Council reaffirming its decision. For socioeconomics, we focused on the 2020 fishing year because this is the first year these measures would apply, and we have harvest limits for these stocks set through the 2019-2020 biennial harvest specifications.

For reference, analyses on blackgill rockfish annual vessel QP limits were developed by Council staff and are presented in "Blackgill Rockfish Accumulation Limits: Alternatives and Draft Impact Analysis" (Agenda Item G.4, Attachment 2, April 2019). Previous analyses for Amendment 26 were presented in a Draft Environmental Assessment (Agenda Item G.4, Attachment 1, April 2019).

Biological Impact Considerations

In 2015 when Amendment 26 was initially developed, the Council considered removing blackgill rockfish from the complex to prevent overfishing. Given the improvements in stock abundance and updated analysis presented in this section, the conservation concerns raised during Amendment 26 development appear to be less urgent in terms of an immediate risk of overfishing. That being said, NMFS supports removal of blackgill rockfish from the southern Slope Rockfish complex to allow for active management in the event overfishing occurs in the future.

The objectives of the Council's recommendation to remove blackgill rockfish from the southern Slope Rockfish complex appear to be consistent with National Standard 1 of the Magnuson-Stevens Fishery Conservation and Management Act. The Council's recommended changes to stock complex composition may better comply with the National Standard 1 guidelines, which recommend stocks managed in a stock complex "should have a similar geographic distribution, life history characteristics, and vulnerabilities to fishing pressure such that the impact of management actions on the stocks is similar." In this case, blackgill rockfish is vulnerable to fishing pressure from a different mix of gear types when compared to the rest of the complex. This means that, if it becomes necessary to implement management measures to slow blackgill rockfish catch, the available management measures that apply to the entire complex may not have the desired result for blackgill rockfish.

The Northwest Fishery Science Center conducted an update of the 2011 blackgill rockfish assessment in 2017. The 2017 update assessment indicated improved stock abundance, and showed the stock was at 39.4 percent depletion at the start of 2017. The assessment update projected the stock would be above the B_{MSY} target of 40 percent depletion beginning in 2018. For comparison, the 2011 assessment estimated a 30 percent depletion level in 2011 and the stock was found to be in the precautionary zone.

Although the 2017 assessment update indicated stock abundance has improved, blackgill rockfish is a slow growing and late maturing species. Due to the slow growth and late maturation it is likely that if the stock were to become overfished, it would be under a rebuilding plan for many years. Future behavior of IFQ vessels (i.e. whether blackgill rockfish is targeted) also creates some uncertainty in management.

The analysis provided in the GMT's November 2015 Supplemental Report (Agenda Item I.6.a Supplemental GMT Report November 2015) demonstrated the risk of exceeding the component overfishing limit (OFL) is low. Table 3 updates analysis from the October 2015 Draft Environmental Assessment (Agenda Item G.4, Attachment 1, April 2019) and shows blackgill mortality has still not exceeded the annual catch limit (ACL) or OFL contributions to the complex. Attainment from 2015 to 2017 (the most recent full year of data available) was between 30 and 39 percent of the ACL contribution. Table 3 suggests the risk of exceeding the component OFL continues to be low.

Table 3. Mortality of blackgill rockfish in all sectors (including set-asides) south of 40°10' N latitude along with its ACL/OY and OFL contributions to the southern Slope Rockfish complex. Source: Groundfish Expanded Mortality Multi-year (GEMM) database for blackgill rockfish mortality; Draft Environmental Assessment (Agenda Item G.4, Attachment 1, April 2019) for 2003 to 2012 ACL/OY and OFL contribution to the southern Slope Rockfish complex; Harvest Specifications tables for 2013 to 2017 ACL/OY and OFL contributions to the complex.

				Percent Attainment	
Year	Mortality (mt)	ACL/OY Contribution (mt)	OFL Contribution (mt)	ACL/OY Contribution	OFL Contribution
2003	192.3	306.0	343.0	63%	56%
2004	152.5	306.0	343.0	50%	44%
2005	88.6	306.0	343.0	29%	26%
2006	95.2	306.0	343.0	31%	28%
2007	48.5	292.0	292.0	17%	17%
2008	74.9	292.0	292.0	26%	26%
2009	137.9	282.0	282.0	49%	49%
2010	153.1	282.0	282.0	54%	54%
2011	151.4	267.0	279.0	57%	54%
2012	196.1	263.0	275.0	75%	71%
2013	74.3	106.0	130.0	70%	57%
2014	72.7	110.0	134.0	66%	54%
2015	42.3	120.2	137.0	35%	31%
2016	36.7	123.0	140.0	30%	26%
2017	49.1	125.7	143.0	39%	34%

While blackgill rockfish is caught using trawl and non-trawl gear, the other species in the southern Slope Rockfish complex are primarily caught using trawl gear (Agenda Item G.4, Attachment 1, April 2019). Non-trawl impacts to blackgill rockfish appear to be effectively controlled under status quo by cumulative landing limits that were first implemented in 2013. However, there are few measures available to control trawl impacts to blackgill rockfish when it is managed as part of the southern Slope Rockfish complex (status quo) if trawl catches of blackgill rockfish exceed its ACL contribution. Available measures under status quo would include extending the trawl rockfish conservation area (RCA) out to 250 fm coastwide, or implementing seasonal closures to the fishery. These measures would be very disruptive as fishermen would not be able to target other rockfish stocks in that closed area or during that closed season. Thus, removing blackgill rockfish from the southern Slope Rockfish complex would allow for more precise management of the stock and provide more incentive for fishermen to keep blackgill rockfish catch at or below their IFQ.

Closing bottom trawling to 250 fm would substantially reduce blackgill mortality, if needed, because a large area with high blackgill rockfish catch rates (i.e., 150 fm to 250 fm) would no longer be subject to trawling. For example, of the observed hauls shown in Figure 1 that encountered blackgill rockfish, 857 encountered blackgill rockfish between 150 to 250 fm (75th quartile = 122 pounds), whereas relatively fewer hauls (186 hauls) encountered blackgill rockfish between 250 and 300 fm (75th quartile = 97 pounds). It is important to note, however, that because blackgill rockfish bycatch rates would remain relatively high between 250 and 300 fm, closing bottom trawling shoreward of 250 fathoms may not completely eliminate the potential for lightning strikes.

Note that most blackgill rockfish are caught by trawl in the IFQ fishery north of 38° N latitude (Figure 2). Blackgill rockfish caught by IFQ fixed gear (gear switching) are generally caught south of 36° N latitude (e.g., off Morro Bay) between 150 fm and 300 fm.

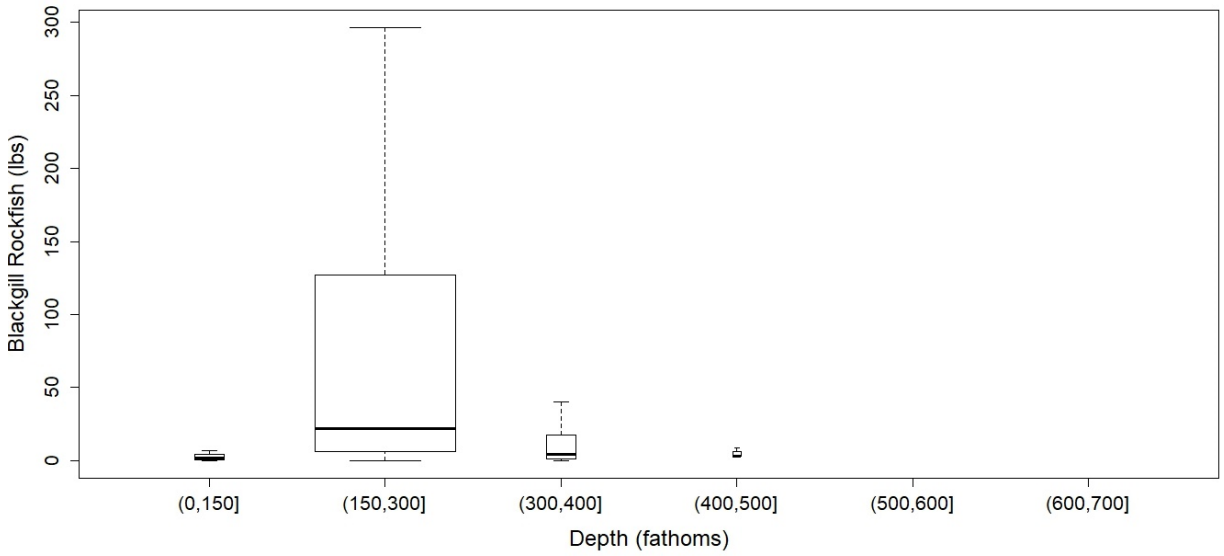

Figure 1. Box plots (25th, 50th and 75th quartiles) showing blackgill rockfish catch (lb) by depth (fathoms) for IFQ bottom trawl south of 40°10' N latitude during 2011 to 2017. Whiskers represent 1.5x the interquartile range. Only hauls where blackgill rockfish were encountered are included. Box width is proportional to the square-root of the number of observations in each group. Note that 95th percentiles were 27 pounds (0 to 150 fm), 1,942 pounds (150 to 300 fm), 131 pounds (300 to 400 fm), and 8 pounds (400 to 500 fm). Outliers are not shown due to confidentiality. Source: WCGOP observer data, with SRC = OBS or SRC = OK included; SRC = FT excluded.

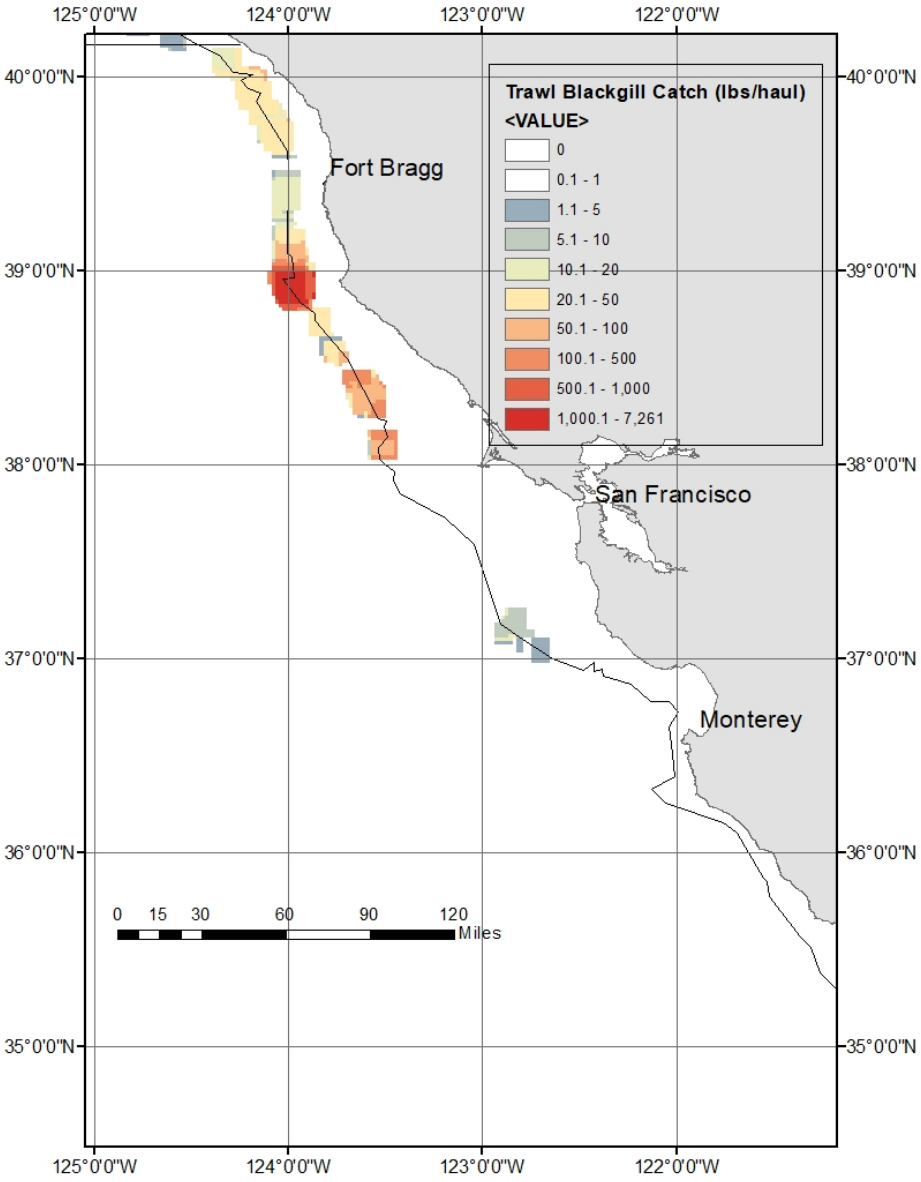

Figure 2. Observer data (2011 to 2017 combined) within 8 nm x 8 nm blocks showing IFQ bottom trawl catch rate for blackgill rockfish (lb/haul) south of 40°10' N latitude, when encountered. Only blackgill rockfish positive hauls were included. Blocks with less than 3 trawl vessels were excluded for confidentiality. The 250 fathom contour line is shown. Source: WCGOP data, with SRC = OBS or SRC = OK included; SRC = FT excluded. Electronic monitoring (EM) trips that were observed are included.

Socioeconomic Impact Considerations

Under the final 2020 harvest specifications, the Minor Slope Rockfish complex south of 40°10' N latitude has a fishery HG of 722.8 mt. The 2020 fishery HG for blackgill rockfish within the southern Slope Rockfish complex is 159.0 mt. Table 4 shows 2020 trawl and non-trawl allocations under Amendment 21 and Amendment 26 schemes.

Table 4. Southern Slope rockfish complex and blackgill rockfish south of 40°10' N latitude allocations under 2020 Harvest Specifications

	Southern Slope Rockfish Complex		**Blackgill Rockfish south**	
	Trawl allocation	**Non-trawl allocation**	**Trawl allocation**	**Non-trawl allocation**
Amendment 21 Allocation (status quo)	63 percent (455.1 mt)	37 percent (267.4 mt)	Not Allocated* (blackgill rockfish part of complex)	
Amendment 26 Allocation (FPA)	91 percent (513.1 mt)	9 percent (50.7 mt)	41 percent (65.2 mt)	59 percent (93.8 mt) Further apportioned limited entry: 60 percent (56.3 mt) open access: 40 percent (37.5 mt)
Amendment 26 Allocation (Alternative 2)	86.5 percent (487.7 mt)	13.5 percent (76.1 mt)	35.6 percent (56.6 mt)	64.4 percent (102.4 mt) Further apportioned limited entry: 60 percent (61.4 mt) open access: 40 percent (41.0 mt)

The Council considered a range of blackgill rockfish trip limits in the 2017-2018 harvest specifications analytical document (Agenda Item G.4, Attachment 2, June 2016, see Table 4-28 and Table 4-112) and recommended a 2,000 lb per 2 months trip limit for limited entry and an 800 lb per 2 months trip limit for open access were Amendment 26 allocations to take effect in 2018.

The Council did not complete a trip limit analysis considering Amendment 26 allocations as part of the 2019-2020 biennial harvest specifications. Therefore, for this analysis and action we are assuming the trip limits from 2020 specifications will hold for limited entry (Table 5) and open access vessels (Table 6)

unless inseason adjustments are made (see "Next Steps" section for additional discussion). The southern Slope Rockfish complex and darkblotched rockfish south trip limits would remain at 40,000 lb per two months for limited entry and 10,000 lb per two months for open access because it is a combined limit. The blackgill rockfish south trip limit for limited entry would be 1,375 lb per 2 months in January through June, and 1,600 lb per two months in July through December. The blackgill rockfish south trip limit for open access would be 475 lb per two months in January through June, and 550 lb per two months in July through December.

Table 5. Limited Entry trip limits - Amendment 26 - 2020 and beyond

Fishery	Jan-Feb	Mar-Apr	May-Jun	July-Aug	Sept-Oct	Nov-Dec
Blackgill rockfish South	1,375 lb/ 2 months			1,600 lb / 2 months		
Minor Slope Rockfish South and Darkblotched Rockfish South	40,000 lb/ 2 months			40,000 lb/ 2 months		

Table 6. Open Access trip limits - Amendment 26 - 2020 and beyond

Fishery	Jan-Feb	Mar-Apr	May-Jun	July-Aug	Sept-Oct	Nov-Dec
Blackgill rockfish South	475 lb/ 2 months			550 lb / 2 months		
Minor Slope Rockfish South and Darkblotched rockfish South	10,000 lb/ 2 months			10,000 lb / 2 months		

Impacts of Status Quo - Trawl and Non-trawl

Cumulative landing limits of blackgill rockfish for non-trawl were reduced starting in 2013 and appear to have been successful in removing any incentive to target blackgill rockfish. However, a similar strategy designed to restrict trawl catches of blackgill rockfish cannot work efficiently under status quo management measures. When in the complex, the measures that could be taken to control trawl impacts on blackgill rockfish include extending the RCA out to 250 fm or implementing seasonal closures to the fishery. Both measures may reduce trawl fishing opportunities for slope species and would increase costs for fishermen that prefer to fish between 150 to 300 fm.

Under status quo, the Amendment 21 southern Slope Rockfish complex sector allocations of 63 percent trawl and 37 percent non-trawl would apply. This arguably would give the non-trawl sectors a higher percentage of the harvestable surplus of the complex than would likely occur if blackgill rockfish were not managed in the complex.

Impact of Amendment 26 - IFQ Trawl vessels

During Amendment 26 development, industry raised concerns that removing blackgill rockfish from the complex may prove constraining for IFQ trawl vessels. The 2017-2018 IFQ modeling indicated the potential for constraint (see page 174 of Agenda Item G.4, Attachment 2, June 2016). However, a stand-alone catch limit for blackgill rockfish may not have constrained the fleet as a whole based on actual fishery performance in 2017. Table 7 demonstrates historical catch of blackgill rockfish by IFQ trawl would have been less than sector-specific allocations under Amendment 26 in most cases. Blackgill rockfish catch would only have been constrained in 2013 for IFQ trawl (including IFQ fixed gear) under Amendment 26 allocations.

Table 7. Blackgill rockfish mortality and Amendment 26 allocation (a retrospective application) south of 40°10' N latitude for the IFQ trawl fishery (including IFQ fixed gear). Percent attainment of the retrospective allocation is also shown. Gray = retrospective allocation would have been exceeded; RF = rockfish. Source: Table 4 in Agenda Item G.4, Attachment 2, April 2019 for trawl allocations; GEMM database for mortality data.

Year	Retrospective Amendment 26 Blackgill RF trawl allocation (mt)	Blackgill RF trawl mortality (including IFQ fixed gear)	Percent attainment
2011	81.9	16.0	20%
2012	81.1	79.7	98%
2013	43.5	54.9	126%
2014	45.1	38.3	85%
2015	46.7	19.5	42%
2016	48.0	11.7	24%
2017	49.3	20.2	41%

Table 8 shows historical catch of southern Slope Rockfish complex (excluding blackgill rockfish) by IFQ trawl (including IFQ fixed gear) would have been less than sector-specific allocations under Amendment 26 and therefore would not have constrained the fleet.

Table 8. Southern Slope Rockfish (excluding blackgill rockfish) mortality and Amendment 26 allocation (a retrospective application) south of 40°10' N latitude for the IFQ trawl fishery (including IFQ fixed gear). Percent attainment of the retrospective allocation is also shown. RF = rockfish. Source: Table 4 in Agenda Item G.4, Attachment 2, April 2019 for trawl allocations; GEMM database for mortality data.

Year	Retrospective Amendment 26 Slope RF trawl allocation, excluding blackgill RF (mt)	Slope RF trawl mortality, excluding blackgill RF (mt)	Percent attainment
2011	363.4	36.1	10%
2012	365.2	43.1	12%
2013	446.8	61.7	14%
2014	446.8	61.7	14%
2015	508.7	49.8	10%
2016	507.8	38.1	8%
2017	515.6	40.1	8%

Economically, blackgill rockfish represents a small percentage of total ex-vessel revenue for IFQ trawl south of 40°10' N latitude (Table 9). Table 10 further shows blackgill rockfish represents a small percentage of total landings by those vessels that landed blackgill rockfish.

Table 9. IFQ trawl landings of selected species south of 40°10' N latitude in 2017 (all IFQ vessels) Source: PacFIN. Note: these values are different than shown in Agenda Item G.4, Attachment 2, April 2019 (See Table 10), due to data updates in the PacFIN database.

Species	Pounds	Ex-vessel revenue ($)	Calculated $/lb
Blackgill rockfish	42,943	26,358	0.61
Minor slope rockfish	83,379	56,038	0.67
Dover sole	647,822	286,280	0.44
Longspine thornyhead	444,976	259,443	0.58
Petrale sole	421,756	477,712	1.13
Sablefish	374,282	736,691	1.97
Shortspine thornyhead	145,306	166,187	1.14

Table 10. Number of vessels making trawl caught IFQ landing of southern blackgill rockfish (south of 40°10' N latitude) including ex-vessel value for blackgill and all other species in the landing. Source: Table 11 from Agenda Item G.4, Attachment 2, April 2019.

			Exvessel Value		Percent	Average Revenue Per Vessel	
Year	Vessels	Days	Blackgill	Total	Blackgill	Blackgill	Other Revenue
2011	11	113	22,600	2,812,053	0.8%	2,055	255,641
2012	10	146	123,163	2,745,647	4.5%	12,316	274,565
2013	11	147	66,599	2,802,995	2.4%	6,054	254,818
2014	12	123	51,337	2,399,547	2.1%	4,278	199,962
2015	9	87	29,082	2,283,992	1.3%	3,231	253,777
2016	6	55	14,277	1,409,210	1.0%	2,380	234,868
2017	8	39	34,068	992,088	3.4%	4,258	124,011

[Internal Ref: Blackgill_QPLim_Analysis_Aug_2018.xlsx: Trips - Rev - 04 – Blackgill]

Blackgill rockfish and southern Slope Rockfish complex landings by the trawl sector (including non-trawl IFQ landings) are concentrated north of Santa Barbara; most landings occur in Fort Bragg and Morro Bay (Agenda Item G.4, Attachment 1, April 2019).

On average from 2011 to 2018, 15 IFQ trawl vessels (including IFQ non-trawl) landed blackgill rockfish annually south of 40°10' N latitude (see Table 11). Under status quo, with no stock-specific constraints for blackgill rockfish south, most annual landings of blackgill rockfish were less than 5,000 lb per vessel (i.e., approximately 10 vessels per year, on average); approximately five vessels per year (on average) landed less than 250 lb of blackgill rockfish (Figure 3). Some vessels landed more than 60,000 lb of blackgill rockfish per year (i.e., slightly less than one vessel per year, on average). Note that 131 entities own QS of southern Slope Rockfish complex (Table 12 and Table 13). Table 11, Table 12, and Figure 3 suggest blackgill rockfish might be readily available on the market for most IFQ vessels who need additional QP. Should blackgill rockfish be removed from the southern Slope Rockfish complex, we expect QS holders would be able to purchase or trade QS or QP to balance their accounts to match their particular fishing strategy.

Should blackgill rockfish become constraining, fisherman could try to avoid blackgill rockfish hot spots (Figure 2). High encounters (e.g. lightning strikes) are most likely to occur for IFQ bottom trawl vessels north of 38° N latitude (Figure 2) and between 150 and 300 fathoms (Figure 1). Blackgill rockfish catch rates drop precipitously for IFQ bottom trawl vessels seaward of 300 fathoms (Figure 1); therefore, vessels may choose to target sablefish, Dover sole, and thornyheads in deeper waters while typically avoiding large catches of blackgill rockfish. Note this analysis differs from the Draft Environmental Assessment (Agenda Item G.4, Attachment 1, April 2019) which suggested blackgill rockfish was difficult to avoid at any depth.

Table 11. Number of IFQ vessels (bottom trawl or fixed gear) that caught blackgill rockfish south of 40°10' N latitude. Counts represent distinct vessels that landed groundfish within each year. Source: PacFIN.

	Number of Vessels with Blackgill Rockfish		
Year	IFQ trawl	IFQ Fixed Gear	Total
2011	11	10	21
2012	10	9	19
2013	11	5	15[a]
2014	12	6	17[a]
2015	9	5	14
2016	6	4	10
2017	10	5	13[b]
2018	6	3	9

a/One IFQ vessel fished both trawl and fixed gear during 2013 and during 2014. Total number of distinct vessels that landed blackgill rockfish is less than the sum of IFQ trawl and IFQ fixed gear vessels.

b/Two IFQ vessels fished both trawl and fixed gear during 2017. Total number of distinct vessles that landed blackgill rockfish during 2017 is less than the sum of IFQ trawl and IFQ fixed gear vessels (i.e., 13 instead of 15).

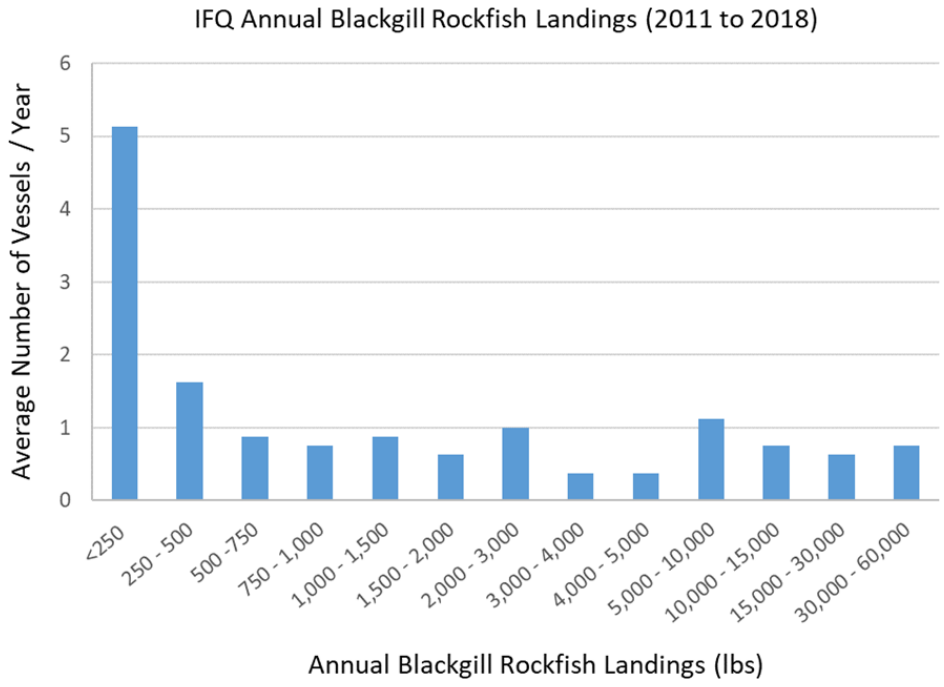

Figure 3. Average annual frequency distribution of vessels landing blackgill rockfish south of 40°10' N latitude for the period 2011 to 2018 (IFQ fixed gear and trawl gear combined). Frequency is the average number of IFQ vessels per year across eight years. Annual pounds landed are shown on the x-axis. For example, an average of five vessels per year landed less than 250 pounds of blackgill rockfish from 2011 to 2018. Note that 131 vessel owners would receive blackgill rockfish quota pounds under Amendment 26 in 2020 (Table 12), whereas an average of 15 vessels per year landed blackgill rockfish south of 40°10' N latitude during 2011 to 2018 (Table 11). Source: PacFIN.

Table 11 shows the potential distribution of southern blackgill rockfish QP among trawl QS permit owners for 2020 under Amendment 26 action alternatives. Under the FPA and of those that receive QP, approximately 57 percent of the QS permit owners would receive less than 300 pounds of blackgill rockfish south, and approximately 12 percent would receive greater than 2,000 pounds in 2020.

Table 12 shows the potential distribution of southern Slope Rockfish complex QP among trawl QS permit owners for 2020 under Amendment 26 action alternatives. Under the FPA and of those that receive QP, approximately 60 percent of the QS permit owner would receive less than 3,000 pounds of southern Slope Rockfish complex, and approximately 18 percent would receive greater than 10,000 pounds in 2020.

T**able 12. Trawl Quota Share permit owners receiving certain levels of Quota Pounds of Blackgill Rockfish south of 40°10' N latitude in 2020 under Amendment 26 Alternatives.** Source: 2019 Quota Share percent (as of March 11, 2019) - NMFS IFQ Public Viewer and 2020 harvest specifications. Does not include Adaptive Management Program (AMP) QP pass through.

Quota Pounds of Blackgill Rockfish South received	**Number of Quota Share permit owners**	
	Amendment 26 - FPA	**Amendment 26 - Alt 2**
0	45	45
1 to 200	6	6
201 to 300	69	71
301 to 500	8	15
501 to 1000	18	14
1001 to 2000	14	9
2001 to 4000	7	11
4001 to 7000	6	2
7001 to 9000	3	3

Table 13. Trawl Quota Share permit owners receiving certain levels of Quota Pounds of Minor Slope Rockfish south of 40°10' N latitude in 2020 under Amendment 26 Alternatives. Source: 2019 Quota Share percent (as of March 11, 2019) - NMFS IFQ Public Viewer and 2020 harvest specifications. Does not include Adaptive Management Program (AMP) QP pass through.

Quota Pounds of Minor Slope Rockfish South received	Number of Quota Share permit owners	
	Amendment 26 - FPA	Amendment 26 - Alt 2
0	45	45
1 to 1000	4	4
1,001 to 3,000	75	76
3,001 to 5,000	14	14
5,001 to 7,000	6	8
7,001 to 10,000	9	11
10,001 to 20,000	7	4
20,001 to 40,000	11	12
40,001 to 70,000	5	4

As the Council considers final action on blackgill rockfish annual vessel QP limits (Agenda Item G.4, Attachment 2, April 2019), we hope this updated analysis provides a more complete understanding of how the fishery would function in 2020 under Amendment 26 allocations.

In summary, our retrospective analysis indicates Amendment 26 FPA allocations of blackgill rockfish and the southern Slope Rockfish complex would not likely constrain the IFQ trawl fleet. We expect QS holders would be able to purchase or trade QS or QP to balance their accounts to match their particular fishery strategy. Should blackgill rockfish become constraining, fishermen may be able to minimize the chance of blackgill rockfish lightning strikes by fishing deeper than 300 fm. ***Given this updated analysis, NMFS supports the Council reaffirming their November 2015 Amendment 26 FPA.***

Impact of Amendment 26 - Non-trawl (Limited Entry fixed gear and Open Access)

Table 14 demonstrates historical catch of blackgill rockfish by non-trawl vessels would have been less than sector-specific allocations under Amendment 26 in most cases. Blackgill rockfish catch would have been constrained under Amendment 26 allocations in 2011 for non-trawl. However, since trip limits for non-trawl were implemented in 2013, blackgill rockfish mortality has been approximately 50 percent of the non-trawl allocation (Table 14). Therefore, we would not expect the Amendment 26 allocation level to constrain blackgill catch in the non-trawl sector relative to the status quo.

Table 14. Blackgill rockfish mortality and Amendment 26 allocations (a retrospective application) south of 40°10' N latitude for non-trawl fisheries. Percent attainment of the retrospective allocation is also shown. Gray = retrospective allocation would have been exceeded; RF =rockfish. Source: Table 4 in Agenda Item G.4, Attachment 2, April 2019 for non-trawl allocations; GEMM database for mortality data.

Year	Retrospective Amendment 26 Blackgill RF non-trawl allocation (mt)	Blackgill RF non-trawl mortality (mt)	Percent attainment
2011	117.8	135.1	115%
2012	116.6	116.1	100%
2013	62.5	18.9	30%
2014	64.9	33.1	51%
2015	67.3	21.7	32%
2016	69.0	24.3	35%
2017	70.9	27.5	39%

Table 15 demonstrates historical catch of blackgill rockfish by non-trawl vessels (Open Access and Limited Entry) would have been less than sector-specific apportionments under Amendment 26 allocations in most cases. Blackgill rockfish catch would have been constrained under Amendment 26 allocations in 2011 for Open Access and Limited Entry, and in 2012 for Open Access. However, since trip limits for non-trawl were implemented in 2013, blackgill rockfish mortality would have been well below the apportionments for both non-trawl sectors under Amendment 26 allocation. Therefore, we would not expect the Amendment 26 allocation level to constrain blackgill rockfish catch in either open access or limited entry non-trawl sectors compared to status quo.

Table 15. Blackgill rockfish mortality and Amendment 26 allocations (a retrospective application) south of 40°10' N latitude apportioned between non-trawl Open Access and Limited Entry fisheries. Allocations distributed between the non-trawl sectors were calculated using methods shown in Table 1. Gray = retrospective allocations would have been exceeded; RF = rockfish. Source: Table 4 in Agenda Item G.4, Attachment 2, April 2019 for non-trawl allocations; GEMM database for 2011-2017 mortality data.

	Non-Trawl Open Access (OA)			Non-Trawl Limited Entry (LE)		
Year	Retrospective Amendment 26 Blackgill RF allocation apportionment (mt)	Blackgill RF mortality (mt)	Percent attainment	Retrospective Amendment 26 Blackgill RF allocation apportionment (mt)	Blackgill RF mortality (mt)	Percent attainment
2011	47.1	50.9	108%	70.7	84.2	119%
2012	46.7	62.4	134%	70.0	53.7	77%
2013	25.0	5.0	20%	37.5	13.9	37%
2014	26.0	5.0	19%	38.9	28.2	72%
2015	26.9	3.3	12%	40.4	18.4	46%
2016	27.6	2.3	8%	41.4	21.9	53%
2017	28.4	3.0	11%	42.5	24.4	57%

For non-trawl fisheries, catch of southern Slope Rockfish complex (excluding blackgill rockfish) would have remained far below the retrospective Amendment 26 allocation both before and after trip limits were imposed in 2013 (Table 16). Table 16 further shows southern Slope Rockfish complex mortality would have been well below the apportionments for non-trawl Open Access and Limited Entry fleets under the Amendment 26 non-trawl allocation. Therefore, we would not expect Amendment 26 to constrain these non-trawl sectors compared to status quo.

Table 16. Slope Rockfish complex (excluding blackgill rockfish) mortality and Amendment 26 allocation (a retrospective application) south of 40°10' N latitude for non-trawl fisheries. Percent attainment of the retrospective allocation is also shown. RF = rockfish. Source: Table 4 in Agenda Item G.4, Attachment 2, April 2019 for non-trawl allocations; GEMM database for 2011-2017 mortality data.

Year	Retrospective Amendment 26 Slope RF non-trawl allocation, excluding blackgill RF (mt)	Slope RF non-trawl mortality, excluding blackgill RF (mt)	Percent attainment
2011	35.9	4.1	11%
2012	36.1	14.3	40%
2013	44.2	4.2	9%
2014	44.2	4.4	10%
2015	50.3	6.1	12%
2016	50.2	3.6	7%
2017	51.0	5.0	10%

Table 17. Slope rockfish mortality (excluding blackgill rockfish) and Amendment 26 allocations (a retrospective application) south of 40°10' N latitude apportioned between non-trawl Open Access and Limited Entry fisheries. Apportionments between the non-trawl sectors were calculated using methods shown in Table 1. RF = rockfish. Source: Table 4 in Agenda Item G.4, Attachment 2, April 2019 for non-trawl allocations; GEMM database for 2011-2017 mortality data.

	Non-Trawl Open Access (OA)			Non-Trawl Limited Entry (LE)		
Year	Retrospective Amendment 26 Slope RF allocation apportionment, excluding blackgill RF (mt)	Slope RF mortality, excluding blackgill RF (mt)	Percent attainment	Retrospective Amendment 26 Slope RF allocation apportionment, excluding blackgill RF (mt)	Slope RF mortality, excluding blackgill RF (mt)	Percent attainment
2011	14.4	0.5	3%	21.5	3.5	16%
2012	14.4	1.4	10%	21.7	12.9	59%
2013	17.7	0.4	2%	26.5	3.8	14%
2014	17.7	0.6	3%	26.5	3.8	14%
2015	20.1	0.9	4%	30.2	5.2	17%
2016	20.1	0.2	1%	30.1	3.4	11%
2017	20.4	0.6	3%	30.6	4.4	14%

Landings by non-trawl sectors are spread more evenly among port areas than IFQ trawl landings, but tend to be greater toward the south, with Morro Bay, San Diego and Santa Barbara the three leading port areas (Agenda Item G.4, Attachment 1, April 2019). The 2017 ex-vessel value of the southern Slope Rockfish complex (including blackgill rockfish) for non-nearshore non-trawl sectors was $103,700 for Limited Entry (blackgill rockfish = $98,500; other Slope Rockfish = $5,200) and $8,800 for Open Access (blackgill rockfish = $7,900; other Slope Rockfish = $900) (PacFIN). To put these amounts into perspective, the 2017 ex-vessel value for sablefish landed by Limited Entry and Open Access non-trawl sectors was $5,462,000 (PacFIN). Additional years of non-trawl ex-vessel values for blackgill rockfish and other southern Slope Rockfish landings (2011 to 2017) are provided in Agenda Item G.4, Attachment 1, April 2019.

In summary, our retrospective analysis indicates Amendment 26 FPA allocations of blackgill rockfish and the southern Slope Rockfish complex would not likely constrain the non-trawl fleet. Since trip limits for non-trawl were implemented in 2013, blackgill rockfish mortality has been approximately 50 percent of the non-trawl allocation. Catch of southern Slope Rockfish complex (excluding blackgill rockfish) would have remained far below the retrospective Amendment 26 FPA allocation both before and after trip limits were imposed in 2013. Maintaining the status quo trip limits under the Amendment 26 FPA allocations for limited entry (Table 5) and open access (Table 6) in 2020 should not be constraining. ***Given this updated analysis, NMFS supports the Council reaffirming their November 2015 Amendment 26 FPA.***

Next Steps

We appreciate the effort the Council put into developing this action so far. We look forward to continuing to collaborate on this action to ensure the stock complex changes are implemented in time for the start of the 2020 fishing year. To finalize this action, we recommend the following next steps:

April 2019 Council Meeting

- Council reaffirms its Amendment 26 FPA for stock/complex restructuring and re-allocation
- Council selects a FPA for blackgill rockfish annual vessel QP limits
- Council considers if it would like to pursue an adjustment of blackgill rockfish and/or complex trip limits for 2020 and its preferred mechanism/meeting to address the adjustment. If the Council wants to adjust 2020 trip limits, NMFS recommends tasking the GMT to evaluate a range of appropriate trip limits for consideration under inseason action at the September 2019 Council meeting. NMFS would then complete an inseason action to adjust trip limits as part of the final rule for Amendment 26. These new trip limits would then be effective beginning January 1, 2020.

Post April 2019 Council Meeting

- NMFS will work with Council staff to ensure Council recommendations and related analyses for the combined Amendment 26 and blackgill rockfish follow-on actions are transmitted to NMFS.
- NMFS will prepare a Categorical Exclusion. Since the Council took final action on Amendment 26, NOAA issued a new Administrative Order (NAO 216-6A) which contains several new Categorical Exclusions. During re-scoping, NMFS identified that Categorical Exclusion A1 could apply to the combined Amendment 26 action.
- NMFS will complete a Regulatory Impact Review (RIR) and an Initial Regulatory Flexibility Analysis (IRFA).

Timing of Amendment 26 Rulemaking and Implementation

Council reaffirms FPA for complex reorganization, selects FPA for annual vessel QP limit: April 2019
Proposed Rule: June 2019
Final Rule: October 2019
Target Implementation: January 1, 2020