

Chapter 11: Assessment of Shortraker Rockfish and “Other Slope Rockfish” Stocks in the Gulf of Alaska (Executive Summary)

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Introduction

Rockfish are assessed on a biennial stock assessment schedule to coincide with new survey data. In the 2009 full stock assessment, the average of exploitable biomass from the three most recent trawl surveys was used to determine the recommended ABC for shortraker rockfish and “other slope rockfish”. For Gulf of Alaska rockfish in alternate (even) years we present an executive summary to recommend harvest levels for the next (odd) year. For this off cycle year there is no new survey information for shortraker and “other slope rockfish”; therefore, the 2009 estimates are rolled over for this year. Please refer to last year’s full stock assessment, which is available online, for further information regarding assessment calculations (Clausen 2009, <http://www.afsc.noaa.gov/refm/docs/2009/GOAshortraker.pdf>). A full stock assessment report with new estimates of exploitable biomass for shortraker and “other slope rockfish” will be presented in next year’s SAFE document.

Updated ABC, OFL, and Catch

For the 2011 fishery, we recommend the maximum allowable ABC of 914 t for shortraker rockfish and 3,749 t for “other slope rockfish”. A summary of these computations and corresponding reference values for shortraker and “other slope rockfish” are presented in the following tables, with the recommended ABC and OFL values in bold.

Quantity/Status for Shortraker Rockfish	Last Year (2009)		This Year (roll-over)	
	2010	2011	2011	2012
<i>M</i> (natural mortality)	0.03	0.03	0.03	0.03
Specified/recommended Tier	5	5	5	5
Biomass	40,626	40,626	40,626	40,626
F_{OFL} ($F=M$)	0.03	0.03	0.03	0.03
$maxF_{ABC}$ (maximum allowable = $0.75 \times F_{OFL}$)	0.0225	0.0225	0.0225	0.0225
Specified/recommended F_{ABC}	0.0225	0.0225	0.0225	0.0225
Specified/recommended OFL (t)	1,219	1,219	1,219	1,219
Specified/recommended ABC (t)	914	914	914	914
Is the stock being subjected to overfishing? ¹	No	No	No	No

Quantity/Status for “Other Slope Rockfish”	Last Year (2009)		This Year (roll-over)	
	2010	2011	2011	2012
<i>M</i> (natural mortality)	Please refer to individual species in table below		Please refer to individual species in table below	
Specified/recommended Tier	Please refer to individual species in table below		Please refer to individual species in table below	
Biomass	76,867	76,867	76,867	76,867
F_{OFL}	Please refer to individual species in table below		Please refer to individual species in table below	
$maxF_{ABC}$ and Specified/recommended F_{ABC}	Please refer to individual species in table below		Please refer to individual species in table below	
Specified/recommended OFL (t)	4,881	4,881	4,881	4,881
Specified/recommended ABC (t)	3,749	3,749	3,749	3,749
Is the stock being subjected to overfishing? ²	No	No	No	No

Species	<i>M</i>	Tier	Biomass	<i>F</i> _{OFL}	<i>maxF</i> _{ABC}	Specified/ recommended <i>F</i> _{ABC}
Sharpchin	0.05	4	17,574	(<i>F</i> _{35%}) 0.064	(<i>F</i> _{40%}) 0.053	(<i>F</i> _{40%}) 0.053
Redstripe	0.10	5	11,594	(<i>F</i> = <i>M</i>) 0.100	(<i>F</i> _{ABC} =0.75* <i>F</i> _{OFL}) 0.075	(<i>F</i> _{ABC} =0.75* <i>F</i> _{OFL}) 0.075
Harlequin	0.06	5	13,290	(<i>F</i> = <i>M</i>) 0.060	(<i>F</i> _{ABC} =0.75* <i>F</i> _{OFL}) 0.045	(<i>F</i> _{ABC} =0.75* <i>F</i> _{OFL}) 0.045
Silvergray	0.05	5	26,495	(<i>F</i> = <i>M</i>) 0.050	(<i>F</i> _{ABC} =0.75* <i>F</i> _{OFL}) 0.038	(<i>F</i> _{ABC} =0.75* <i>F</i> _{OFL}) 0.038
Redbanded	0.06	5	6,436	(<i>F</i> = <i>M</i>) 0.060	(<i>F</i> _{ABC} =0.75* <i>F</i> _{OFL}) 0.045	(<i>F</i> _{ABC} =0.75* <i>F</i> _{OFL}) 0.045
minor species	0.06	5	1,478	(<i>F</i> = <i>M</i>) 0.060	(<i>F</i> _{ABC} =0.75* <i>F</i> _{OFL}) 0.045	(<i>F</i> _{ABC} =0.75* <i>F</i> _{OFL}) 0.045
All species			76,867			

Species	Specified/ recommended OFL (t) (<i>F</i> _{OFL} *exploitable biomass)	Specified/ recommended ABC (t) (<i>F</i> _{ABC} *exploitable biomass)
Sharpchin	1,125	931
Redstripe	1,159	870
Harlequin	797	598
Silvergray	1,325	994
Redbanded	386	290
minor species	89	67
All species	4,881	3,749

¹The official catch estimate for the most recent complete year (2009) for shorttraker rockfish is 567 t. This estimate is substantially less than the 2009 shorttraker rockfish OFL of 1,197 t. Therefore, the stock is not being subjected to overfishing.

²The official catch estimate for the most recent complete year (2009) for “other slope rockfish” is 881 t. This estimate is substantially less than the 2009 “other slope rockfish” OFL of 5,624 t. Therefore, the stock is not being subjected to overfishing.

Updated catch data (t) for shorttraker rockfish and “other slope rockfish” in the Gulf of Alaska as of October 2, 2010 (<http://www.fakr.noaa.gov/2010/2010.htm>) are summarized in the following table.

Year	Gulf of Alaska Area			Gulfwide Total	Gulfwide ABC	Gulfwide TAC
	Western	Central	Eastern			
	<u>Shorttraker Rockfish</u>					
2009	155	199	213	567	898	898
2010	64	133	249	446	914	914
	<u>“Other Slope Rockfish”</u>					
2009	402	386	93	881	4,297	1,730
2010	356	409	161	926	3,749	1,192

Area Apportionment

The apportionment percentages are identical to last year, because there is no new survey information. The following table shows the recommended apportionment for 2011. Please refer to last year's SAFE report for information regarding the apportionment rationale for shortraker and "other slope rockfish".

	Western	Central	Eastern	West Yakutat	E. Yakutat/Southeast	Total
<u>Shortraker Rockfish</u>						
Apportionment	14.63%	35.56%	49.81%			
Area ABC (t)	134	325	455			914
Area OFL (t)						1,219
<u>"Other Slope Rockfish"</u>						
Apportionment	5.65%	13.53%		7.28%	73.54%	
Area ABC (t)	212	507		273	2,757	3,749
Area OFL (t)						4,881

Responses to Council, SSC, and Plan Team Comments

The GOA Plan Team 2009 minutes included the following comments concerning all stock assessments:

"That the AFSC coordinate with the Regional Office a source for catch data to ensure that authors use the same set of reports for recent years (e.g., for the current and previous year). This also applies for prohibited species catch (PSC) tables as well as non-target species catch."

A coordinated effort between Fisheries Monitoring and Assessment (FMA) division, the Alaska Regional Office (AKRO) and the Pacific States Marine Fisheries Commission (PSMFC) was initiated in 2009 to utilize the Alaska Fisheries Information Network (AKFIN) as a data warehouse for Alaska Fisheries Science Center (AFSC) economists and stock assessment scientists. A workshop was held in February 2010 at the Auke Bay Laboratories (ABL) where FMA, AKRO, AKFIN, and ABL staff discussed the types of fishery data required each year for the stock assessments and SAFE reports. Included in this workshop was an introduction to the new AKFIN Answers Dashboard site and newly added North Pacific Observer (NORPAC) database tables. The AKFIN site is a coordinated effort between AKRO, FMA, and AKFIN to house and distribute fishery data. The new NORPAC tables facilitate access to the observer data across the entire historical time series. Following this workshop, a reports committee consisting of AFSC and AKFIN staff was developed to produce standardized catch reports available through the AKFIN Answers site. These reports are in the testing phase and will be available for assessments in 2011.

"For fisheries where bycatch in halibut fisheries apply, authors are requested to coordinate with the Regional Office or other appropriate agency to account for these removals."

The issues of unobserved incidental catch in the IFQ halibut fishery is of increasing concern in the management of many GOA species, and the SSC has specifically requested catch estimates for roughey rockfish, sharks and skates. A working group was formed in 2010 to examine quantitative methods to estimate the incidental catch of non-target species. The working group presented multiple approaches to the Joint Groundfish Plan Team at the September 2010 meeting and will present catch estimates of four example species for review at the November 2010 Plan Team meeting. After the SSC reviews the methods and determines the most appropriate, the working group will prepare time series estimates of catch for all non-target species. This data will be available to assessment authors for the 2011 stock assessment cycle.

The SSC December 2009 minutes included the following comments concerning all stock assessments:

“The SSC suggests that description of the apportionment rationale in each SAFE chapter of area-apportioned species would be helpful to the reader.”

The apportionment rationale for shortraker and “other slope” rockfish is explained in the *ABC Recommendations for Shortraker Rockfish* and *ABC Recommendations for “Other Slope Rockfish”* sections of the 2009 full SAFE report under *ABC Recommendations and Overfishing Levels*. Apportionment is determined based on the geographic distribution of shortraker and “other slope rockfish” biomass in the trawl surveys. This distribution has been computed as a weighted average of the percent biomass distribution for each area in the three most recent trawl surveys. Each successive survey is given a progressively heavier weighting using factors of 4, 6, and 9, respectively.

The GOA Plan Team 2009 minutes included the following comments concerning all rockfish:

“Some rockfish assessments may have revised maturity estimates and the Team would like to review comparisons of these studies in September 2010. In particular, locations and timing of samples, and recommendations from assessment authors for approaches to modifying assessments.”

A report on estimating rockfish maturity in the Gulf of Alaska was prepared and presented by ABL rockfish staff for the September 2010 Plan Team meeting. The GOA rockfish assessment authors will investigate methods for incorporating new maturity information into the assessment for 2011. Allowing for uncertainty of maturity estimates within the assessment is a possibility, but further exploration of such methods is needed.

The GOA Plan Team 2009 minutes included the following comments concerning shortraker and “other slope” rockfish:

“Plan Team recommendations for the next assessment:

- 1.) Same recommendation for consideration of bycatch in halibut fishery as with rougheye and blackspotted rockfish.” [which were to] “Evaluate to what extent bycatch in the halibut fishery is an issue in terms of total removals. Note to coordinate with other authors regarding appropriate methodology for estimating bycatch from this fishery.”*

Please refer to previous response regarding bycatch in the halibut fisheries in GOA Plan Team 2009 minutes section concerning all stock assessments.

The SSC December 2009 minutes included the following comments concerning shortraker and “other slope” rockfish:

“The SSC requests that the authors review the time trends for silvergray rockfish to assess whether recent declines are a conservation concern. The age data for silvergray rockfish ends in 1999. The SSC encourages the authors to request age determinations for silvergray rockfish collected in recent years to assess whether declines are due to recruitment failure or shifting spatial distributions.”

The issue of declines in biomass of silvergray rockfish in GOA trawl surveys, and whether this a conservation concern, will be addressed when a full assessment for GOA “other slope rockfish” is completed in 2011. A request for aging silvergray rockfish from the 2007 GOA trawl survey was added to the aging priority list for rockfish submitted to the AFSC REFM aging unit for 2010.

“The SSC requests that the author reviews the current harvest of harlequin rockfish to determine whether the current harvest strategy is sustainable for this species.”

This will be addressed when a full assessment for GOA “other slope rockfish” is completed in 2011.

Research Priorities

It is critically important to rockfish stock assessments that the GOA trawl surveys continue and that they extend into deeper waters (>300m) in order to cover the range of primary habitat for rockfish. There is little information on larval, post-larval, or early juvenile stages of rockfish. Habitat requirements for these stages are mostly unknown. Research on early life history parameters and essential habitat for these early life stages is vital to effective management of rockfish.

Summaries for Plan Team

Species	Year	Biomass ¹	OFL	ABC	TAC	Catch ²
Shortraker rockfish	2009	39,905	1,197	898	898	567
	2010	40,626	1,219	914	914	446
	2011	40,626	1,219	914		
	2012	40,626	1,219	914		

Stock/ Assemblage	Area	2010 OFL	ABC	TAC	Catch ²	2011 OFL	ABC	2012 OFL	ABC
Shortraker rockfish	W		134	134	64		134		134
	C		325	325	133		325		325
	E		455	455	249		455		455
	Total		1,219	914	914	446	1,219	914	1,219

Species	Year	Biomass ¹	OFL	ABC	TAC	Catch ²
“Other Slope Rockfish”	2009	90,283	5,624	4,297	1,730	881
	2010	76,867	4,881	3,749	1,192	926
	2011	76,867	4,881	3,749		
	2012	76,867	4,881	3,749		

Stock/ Assemblage	Area	2010 OFL	ABC	TAC	Catch ²	2011 OFL	ABC	2012 OFL	ABC
“Other Slope Rockfish”	W		212	212	356		212		212
	C		507	507	409		507		507
	WYAK		273	273	128		273		273
	SEO		2,757	200	33		2,757		2,757
	Total		4,881	3,749	1,192	926	4,881	3,749	4,881

¹Total biomass from trawl survey estimates

²Current as of October 2, 2010 (<http://www.fakr.noaa.gov/2010/2010.htm>)

Note: all values for “other slope rockfish” include northern rockfish in the eastern Gulf of Alaska.

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