

**OREGON DEPARTMENT OF FISH AND WILDLIFE SUPPLEMENTAL REPORT ON
 OPPORTUNITY TO SUSTAINABLY REVITALIZE SHELF ROCKFISH FISHERIES**

The Oregon Department of Fish and Wildlife (ODFW) offers the following comments on the selection of Annual Catch Limits (ACLs) for shelf rockfish and the proposed allocation of canary rockfish. Our hope is to facilitate consideration and discussion of these issues by the Council, its advisory bodies, and the public in advance of decision-making at future meetings.

Part I. Shelf Rockfish Annual Catch Limits

Rebuilt stocks provide opportunity to reinvigorate fisheries

The rebuilding of the canary rockfish and widow rockfish stocks presents the Council with the opportunity to revitalize shelf rockfish fisheries in a sustainable manner. The restrictive ACLs established in rebuilding plans have served their purpose of rebuilding these stocks above management targets, and the Council can now best meet the goals of the Magnuson-Stevens Act¹ (MSA) by setting harvest limits that provide opportunity to achieve optimal and sustainable yields based on the best available science.

Table 1. ACL alternatives for canary and widow rockfish. Yellowtail rockfish ACL also shown as this species is a key component of fisheries encountering canary and widow rockfish.

	No Action		Alternative 1		Alternative 2		2016 ACL (mt) (for reference)
	2017 mt	2018 mt	2017 mt	2018 mt	2017 mt	2018 mt	
Canary RF	<i>ACL=ABC P*0.45</i> 1,714	<i>ACL=ABC P*0.45</i> 1,588	<i>50% of No Action</i> 857	<i>50% of No Action</i> 763	<i>33% of No Action</i> 566	<i>33% of No Action</i> 504	122
Widow RF	<i>Constant Catch a/</i> 2,000	<i>Constant Catch a/</i> 2,000	<i>ACL=ABC P*0.45</i> 13,508	<i>ACL=ABC P*0.45</i> 12,655	N/A	N/A	2,000
Yellowtail RF N 40 ⁰ 10' b/	<i>ACL=ABC P*0.45</i> 6,574	<i>ACL=ABC P*0.45</i> 6,002	N/A	N/A	N/A	N/A	6,590

Notes:

Grey shaded alternatives use default harvest control rules to sustainably optimize yield based on base models of Council-adopted stock assessments

White alts were set below ABC for additional precaution

a/ Set below 2011 ABC (rebuilding year) for precaution and allow access to target stocks

b/ Yellowtail RF S 40⁰10' managed in shelf complex with ACL contribution of 888 mt in 2017 and 2018

¹ http://www.nmfs.noaa.gov/sfa/laws_policies/msa/documents/msa_amended_2007.pdf

Uncertainty and precaution are factored into default processes and control rules

We believe that setting ACLs equal to Acceptable Biological Catches (ABCs; Table 1) offers the best opportunity to achieve the goals of harvesting OY, using the best available science, and considering efficiency; and presents little risk to the conservation of shelf rockfish stocks or the stability of fisheries. This action would use the results from stock assessments endorsed by the Scientific and Statistical Committee (SSC) and Council as the best available science. It appropriately accounts for scientific uncertainty as determined by the SSC through setting an ABC lower than the Overfishing Limit (OFL), and employs the default harvest control rules established in the Pacific Coast Groundfish Fishery Management Plan² (FMP) as envisioned when the Council adopted Amendment 24. Although there is uncertainty associated with some of the model inputs and results of the 2015 canary rockfish assessment, we believe that it is no greater than normal in this case and does not require extra precaution added to the built-in measures designed to account for scientific and management uncertainty. These measures adequately account for the “what if we’re wrong” factor.

There would be time to respond if the stock were to decline more rapidly than desired

We acknowledge that there may be concerns that insufficiently precautionary canary rockfish harvest levels could result in driving the depletion level back down to depleted or overfished status, and return canary to a “choke species”, constraining access to healthy, abundant stocks. We believe that setting the 2017-2018 ACLs equal to the ABC does not pose such a risk. The canary rockfish stock is now at an estimated depletion level (56%) (Thorson and Wetzel 2015³) well above the management target of 40% and the overfished threshold of 25%. Only under a scenario that could be considered “worst case” for this purpose (i.e., low natural mortality state of nature and catches equal to the full ACL) would the stock drop below the overfished threshold—but not until 2023. There would be sufficient time to monitor performance under the selected ACL’s and to adjust harvest specifications and management measures if necessary.

In addition, as with all low state of nature scenarios in the Council process, there is a 75 percent probability that the true state of nature is more productive than the low state of nature. Furthermore, it is important to note that the harvest levels for canary rockfish that drove the stock to overfished status were ~3,000-5,000 metric tons per year, approximately double (or greater) the estimate of sustainable yield from the 2015 stock assessment (1,714 mt for 2017).

Potential economic benefits depend on selecting ACL = ABC for both canary and widow, and differ significantly between alternatives

With both canary rockfish and widow rockfish ACLs set at the ABCs (Table 1), the value of the mid-water shelf rockfish stocks (including yellowtail rockfish) to commercial fisheries could increase by up to ~\$13.3 million per year in ex-vessel revenue, from ~\$9.7 million in 2016 to ~\$23.0 million for 2017. Recreational fisheries are also expected to see an economic benefit from the rebuilding of canary rockfish, although it is not quantified in this report. Achieving the full economic potential of the rebuilding of canary rockfish depends on setting the widow rockfish ACL equal to ABC – in Table 1, note the significant reduction in potential economic value if the lesser ACL for widow rockfish (“NA”) is used, regardless of the canary rockfish ACL. Canary rockfish, even under the maximum ACL of 1,714 mt, may continue to constrain access to target

² <http://www.pcouncil.org/groundfish/fishery-management-plan/#gfFMPfull>

³ http://www.pcouncil.org/wp-content/uploads/2015/05/D8_Att1_Canary_2015_FULL-E-Only_JUN2015BB.pdf

stocks. Even if the highest ACLs are selected, there would still be only one pound of canary rockfish per 12 pounds of yellowtail and widow rockfish available. This ratio increases to 1:24 for canary rockfish Alternative 1, and to 1:37 for canary rockfish Alternative 2. For comparison, from 1990-1999 (prior to rebuilding restrictions on canary or widow rockfish), the annual ratio of canary to widow and yellowtail combined ranged from 1:3 to 1:13 (in landed pounds reported on fish tickets, all commercial fisheries in PFMC area combined; PacFIN data).

Table 2. Differences among ACL alternatives (scenarios) for canary and widow rockfish in metric tons and ex-vessel revenue. Yellowtail ACL also shown as this species is a key component of shelf fisheries.

Scenario (combinations of ACL alternatives for canary rockfish & widow rockfish)	Metric tons of ACL				Economic potential b/ (ex-vessel value of ACL, millions of \$)		ratio of canary to (widow+yellow-tail) ACL, in lbs
	Canary	Widow	Yellowtail a/	Total	Total c/	increase from 2016	
<i>2016 ACLs for comparison</i>	122	2,000	7,478	9,600	9.7	---	1:78
(1) Canary NA; Widow A1	1,714	13,508	7,462	22,684	23.0	13.3	1:12
(2) Canary A1; Widow A1	857	13,508	7,462	21,827	22.1	12.4	1:24
(3) Canary A2; Widow A1	566	13,508	7,462	21,536	21.8	12.1	1:37
(4) Canary A2; Widow NA	566	2,000	7,462	10,028	10.2	0.4	1:17

a/ Yellowtail includes 888 mt ACL contribution for shelf rockfish S 40°10'

b/ Conservative: does not include value to processors or other fishery related industry; does not include value from

c/ Weighted average price per pound for trawl and fixed-gear landings: ~\$0.45 trawl*~.9 (allocation) + ~\$0.53 FG x ~

A large increase in ACL after rebuilding is expected; applying default harvest control rules is risk-averse.

Under the canary rockfish rebuilding plan⁴, large reductions in the ACL limited fishing mortality to very low rates to allow rebuilding from overfished status. Upon achieving this goal, a sizeable increase in the ACL in the first year of post-rebuilding harvest specifications is expected as a result of returning to default harvest control rules based on MSA standards and procedures outlined in the Groundfish FMP. While canary rockfish ACLs equal to ABCs are a large jump from ACLs in recent years, this is entirely due to a large improvement in status from overfished to well above the management target. Following the established guidelines, using the best available science from the most recent stock assessments, and determining harvest levels based on default harvest control rules is, by definition, sustainable and precautionary.

The significant economic and social hardships of the rebuilding regime were borne by fishermen, processors, other fishing associated businesses, and coastal communities. Setting ACLs equal to ABCs for these rebuilt stocks will not only provide access to optimal yield with little risk to canary rockfish stocks or other fisheries, it will underscore the Council’s commitment to the integrity of the science and management decision-making that underpin the stock assessment and rebuilding processes, and to the intended rebuilding outcomes of higher optimal yields and improved economic benefits over the long term.

⁴ http://www.pcouncil.org/wp-content/uploads/Canary_Rockfish_2002_Rebuilding.pdf

Part II. Canary Rockfish Allocation

Because canary rockfish may limit access to the other mid-water shelf rockfish stocks even if the highest annual catch limit (ACL) alternative is selected, it is important to the goals of achieving optimal yield (OY) of multiple species and ensuring fairness and equity that the canary rockfish ACL be allocated to the fishery sectors in an optimal manner. We believe that there may be some opportunity for improvement to the current allocation alternatives, which are based on either catch history or allocation history over pre- and post-overfished time periods (GMT strawman proposals; Agenda Item I.9.a. [Supplemental GMT Report 3, November 2015](#)), or combinations of catch and allocation history (Council motion). Under several of those alternatives, the non-trawl fisheries and at-sea whiting sectors appear to have allocations greater than they may be able to use under current season structures and regulations, while the IFQ sector—particularly the non-whiting trawl component—may not be allocated enough to fully access its share of the more robust yellowtail and widow rockfish stocks.

ODFW has developed a revised method to offer for consideration by the Council and its advisory bodies. In general, the overall goal and approach is to first provide for the potential impacts on canary rockfish by accounting for retention in the relatively smaller-scale non-trawl fisheries which have limited ability to access shelf rockfish stocks due to yelloweye rockfish constraints, and then to allocate the remainder to the trawl fisheries, which have greater capability to utilize shelf rockfish, particularly with midwater gears which are “clean” in terms of yelloweye rockfish.

The steps in determining allocations under this proposal are described below, and Table 3 illustrates its application to the three proposed canary rockfish ACLs. This information is intended to facilitate evaluation of the approach and we welcome suggested modifications.

- 1) At the highest ACL for canary rockfish (1,714 mt), the smaller-scale non-trawl sectors would be allocated enough canary rockfish (by weight) to meet their estimated needs (to access target stocks, retain incidentally caught canary rockfish, and buffer for variability in catches).
- 2) The remainder (ACL – set-asides – non-trawl mt) would be allocated to the trawl sectors.
- 3) To determine allocations under the lesser ACL alternatives, the percentages resulting from the steps 1 and 2 would be applied to each ACL, resulting in proportional impact of the lower ACL on each sector.

Table 3. Potential new allocation of canary rockfish

Canary rockfish ACL alternative		No Action		Alt 1 g/	Alt 2 g/
		mt	% of HG	MT	MT
Canary rockfish ACL		1714	---	857	566
(-) fixed set-asides		15	---	15	15
= Fishery HG		1699	100%	842	551
STEP 1:	Rec: WA a/	10	0.6%	5	3
For high ACL, non-trawl assigned tons to meet needs	Rec: OR b/	50	2.9%	25	16
	Rec: CA c/	140	8.2%	69	45
	Non-Nearshore d/	5	0.3%	2	2
	Nearshore e/	30	1.8%	15	10
STEP 2:	Remainder for trawl	1464	---	---	---
Remainder to trawl with SQ allocations?	Mothership (10.2%) f/	149	8.8%	74	48
	Catcher-Processor (14.4%) f/	211	12.4%	105	68
	IFQ (75.4%) f/	1104	65.0%	547	358
STEP 3: %'s from high ACL applied to fishery HGs of lower ACL alts					

To determine the allocations within the IFQ program to the whiting and non-whiting sectors, the Council may wish to carry the current canary rockfish allocation proportions for those sectors forward status quo into 2017-2018. If the Council wishes to explore a different approach, one logical option might be to use current allocations of a portfolio of target species with which canary rockfish are more likely to be encountered (such as widow and yellowtail rockfish) to make pro-rata canary rockfish allocations. Preliminary results from this approach are shown in Table 4.

Table 4. Status quo and "target species portfolio pro rata" trawl allocations of canary rockfish

	Current allocation of target stocks			Remainder to trawl could be split by:	
	Widow	Yellowtail	Combined	% of target stocks (widow + yellowtail)	Current canary allocations in rule
ACL	13,508	6,574	20,082		
Set-asides	120	1,030	1,150		
Fishery HG	13,388	5,544			
% Trawl	0.91	0.88			
Trawl Mt	12,183	4,879	17,062		
% Trawl whiting	10%	300 off-top			
MS Whiting					10.2%
CP Whiting	1218	300	1,518	8.9%	14.4%
IFQ Whiting					65.0%
IFQ non-whiting	10,965	4,279	15,962	91.1%	

ODFW will continue to work with our management partners, Council advisory bodies, and industry to facilitate discussion on the potential advantages and viability of a modified canary rockfish allocation alternative. If this proposal appears to merit further consideration, we will provide a full description to the Council and advisory bodies prior to the April PFMC meeting.

It is important to note that any allocation approach will not account for future changes in the ability of each sector to harvest shelf rockfish stocks, for example, due to rebuilding of overfished species or changes to the non-trawl Rockfish Conservation Areas regulations. Therefore, we highlight the short-term nature of any canary rockfish allocation alternative selected for 2017-2018 fisheries, and the need to revisit it as conditions change. We would also like to emphasize that we are particularly interested in the Groundfish Advisory Panel's perspective on the fairness and equity of this and other alternatives that seek to optimize the use of canary rockfish harvest rather than tying allocations to historical conditions.