

SALMON ADVISORY SUBPANEL REPORT ON LOWER COLUMBIA RIVER COHO HARVEST MATRIX

The Salmon Advisory Subpanel (SAS) met in a joint session with the ad hoc Lower Columbia River Natural Coho Workgroup (LRC Workgroup) in Portland, Oregon on September 3rd and provides the following comments.

The SAS is encouraged by the ongoing LRC Workgroup effort to simplify the harvest policy for Lower Columbia River natural (LCN) coho and to explore options that allow greater fishery management flexibility and opportunity without adding substantial risks to stock recovery. The SAS notes that the States of Oregon and Washington have collected, and continue to collect, new information on the status of these stocks since they were listed under the Endangered Species Act in 2005. This new information is greatly appreciated and warrants a renewed analysis of the status and management of LCN coho.

A simplified matrix structure substantially enhances the ability to understand and weigh fishery implications of various alternatives. The risk analysis was informative in helping to understand the relative effects of fishery alternatives on LCN coho. It is clear that comparable levels of risk may be produced by a variety of more or less complicated harvest control rules.

Focusing risk analyses on the weakest primary populations identified in State and Federal recovery plans provides a conservative standard for evaluating fishery alternatives. However, the SAS urges caution in the application of weak stock fishery management for the Lower Columbia River coho evolutionarily significant unit (ESU) because several populations are depressed and relatively unproductive due to habitat limitations and exhibit a reasonable chance of reaching critically low levels in the absence of fishing. Fishing restrictions alone will not achieve stock recovery and will need to be coupled with habitat reforms and conservation.

At current fishing levels, it is clear that small changes in effective average annual exploitation rates have a very small impact on LCN coho conservation risks. Further reductions in fishing rate from current level do not provide large risk reductions. Small increases in exploitation rates and an abundance-based fishery strategy can provide substantial fishery benefits with a negligible cost in risk.

The SAS feels that annual exploitation rates of 10 percent to 30 percent are appropriate for consideration in fishery alternatives. A rate of 10 percent is necessary to conduct Chinook-only fisheries. The current LCN coho matrix includes rates as low as 8 percent, but this rate is not sufficient to account for incidental coho mortality in Chinook-directed fisheries, particularly in years of high Chinook abundance. The risk analysis showed that managing for 10 percent rather than 8 percent at the low end had a negligible effect on risk. A rate of 30 percent on the high end is appropriate for accessing large returns of Columbia River hatchery coho in years of good marine survival. This opportunity is particularly important to the long-term economic viability of Columbia River target coho fisheries. Within these high and low limits, fishing strategies and harvest policy should provide for meaningful fishing rates in the middle range of marine survival where we will be operating most of the time. Continuous, rather than stepped matrix structures, might be considered to soften the

fishery effects of small differences in marine survival index estimates around the step thresholds in exploitation rate.

Working with the preceding concepts and criteria and the options presented the risk analysis (Agenda Item D.2.a, Attachment 1) as well as the options discussed at the September 3rd meeting (Agenda Item D.2.a, Attachment 2) the SAS recommends focusing future analyses and considerations on the options shown in the attached table.

The SAS agrees with the recommendation of the LRC Workgroup that any new harvest approach be reviewed three years after implementation. This will allow an opportunity to review new stock status information, collected by Washington and Oregon, to respond to the results of a National Marine Fisheries Service status review of the ESU scheduled for 2015, and to evaluate the initial performance of a new harvest policy. The SAS would like to recognize the importance of the monitoring efforts by Oregon and Washington and strongly recommends that these effort continue.

The Council is tentatively scheduled to develop a final recommendation to NMFS at the November 2014 Council meeting. The SAS feels that a final recommendation should not come at the expense of a quality product with stakeholder support. The SAS is encouraged by the work completed to date, but recognizes that there is work to be done. To that end, the SAS is planning to meet with the LRC Workgroup in mid-October to review Council guidance and to further refine the recommendations. The SAS is also planning to attend the November 2014 Council meeting in Costa Mesa, California.

Model	No.	Structure	Exploitation			Effective ER ^b	Risk 5 high ^c
			Rates (%) ^a	Frequencies (%)	Seeding categories		
actual	--	Current (Sandy/Clack)	8/15/20/22.5	10/60/20/10	--	16.0%	--
3	a	Current (all pops)	8/11/15/20/25/30/38+	24/0/48/20/0/8/1	0/0.10/0.20/0.50/0.75	15.7%	0.346
4	b	1 x 4	10/15/20/25	10/25/60/5	--	18.0%	0.364
5	b	1 x 5	<u>10/15/20/25/30</u>	<u>10/35/45/5/5</u>	--	18.0%	0.364
6	b	Continuous	10/10-15/15-20/20-25/25-30	<u>5/10/58/27/0</u>	--	18.0%	0.363
6	c	Continuous	10/10-15/15-20/20-25/25-30	<u>5/10/50/30/5</u>	--	18.6%	0.368
7	5b1	2 x 5	10/15/20/25/30	= 10/35/45/5/5	--	18.0%	0.364
			10/10/15/20/25	0/100 =			
8	a	1 x 3 (new) ^d	10/19/22.5	15/60/25	--	18.5%	0.365

^a Exploitation rates include only ocean and Columbia River mainstem fisheries – tributary fishery impacts are in addition.

^b Effective exploitation rate is the weighted average in all years.

^c 5-high risk is the average for the 5 highest risk and most sensitive model populations.

^d Identified in 09/03/14 SAS/LRC WG meeting.