

5. Gulf of Alaska Rex Sole (Executive Summary)

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5.1 Introduction

Rex sole has been moved to a biennial stock assessment schedule to coincide with new survey data. On alternate (even) years we will present an executive summary with last year's key assessment parameters and projections for this year. A discussion at the September 2006 Groundfish Plan Team meetings concluded the following two important points for updating information in off-year assessments:

- 1) Anytime the assessment model is re-run and presented in the SAFE Report, a full assessment document **must** be produced.
- 2) The single-species projection model **may** be re-run using new catch data without re-running the assessment model.

Therefore, as opposed to 2005, we will not be running the model with updated catch information, but will run the single-species projection model with the updated catch information and present those results with last year's projection results. This projection is based on the 2005 model results. For further information about the model, last year's full stock assessment is on the web (Turnock et al. 2005, <http://www.afsc.noaa.gov/refm/docs/2005/GOArex.pdf>).

5.2 Updated catch and projection

The only new information that is updated in the projection is the 2005 catch (2,177 t) and the best estimate of the 2006 catch (3,280 t). The recommended ABC and OFL in last year's assessment were based on Tier 5 calculations applied to the model estimate of adult biomass, since estimates of $F_{35\%}$, $F_{40\%}$ and $B_{40\%}$ were not considered reliable. We used a similar approach here. The projection model was run to generate estimates of total adult biomass for 2006-2008. The catch to be taken in 2007 was assumed to be identical to the catch in 2006. ABC and OFL for each year were then calculated as in Tier 5, using the catch equation and $M = 0.17$. For the 2007 fishery, we recommend the ABC of 9,100 t from the updated projection. This ABC is similar to last year's recommended ABC for 2007 of 8,700 t. The corresponding reference values for rex sole are summarized below, with the recommended values in bold:

	Last year's projection-not updated		This year's projection-updated	
	<u>2006</u>	<u>2007</u>	<u>2007*</u>	<u>2008</u>
Total adult biomass (t)	83,600	79,100	83,475	82,403
F_{ABC} (maximum allowable= $0.75 * M$)	0.128	0.128	0.128	0.128
F_{OFL} ($=M$)	0.17	0.17	0.17	0.17
ABC (t)	9,200	8,700	9,100	8,900
OFL (t)	12,000	11,400	11,900	11,600

5.3 Area Apportionment

The recommended apportionment percentages are identical to last year, because there is no new survey information. The following table shows the recommended apportionment for 2007:

Area:	Western	Central	West	Southeast	Total
			Yakutat	Outside	
Apportionment (%)	12.6	59.8	11.4	16.1	100
Area ABC (t)	1,147	5,446	1,037	1,470	9,100

5.4 Research Priorities

Simulation studies are needed to explore the effects of high reference fishing mortality values and variability in yield and spawning biomass.

The extent that a directed fishery may alter the current estimates of selectivity are needed prior to developing a rex sole fishery closer to optimum levels (e.g., at F_{ABC} harvest rates).

5.5 Summaries for Plan Team

Species	Year	Biomass ¹	OFL ²	ABC ²	TAC ²	Catch ³
Rex sole	2005	82,513	16,480	12,650	12,650	2,177
	2006	83,475	12,000	9,200	9,200	33,803
	2007	82,403	11,900	9,100		
	2008	80,757	11,600	8,900		

¹Total biomass from the age-structured model (2005) or projection model (2006-2008).

²As published in the Federal Register (2005, 2006) or as recommended based on Tier 5 calculations using adult biomass from the projection model (2007, 2008).

³As of Oct. 28, 2006.

Stock/ Assemblage	Area	2006				2007		2008	
		OFL ¹	ABC ¹	TAC ¹	Catch ²	OFL	ABC	OFL	ABC
Rex sole	W	--	1,159	1,159	352	--	1,147	--	1,122
	C	--	5,506	5,506	2,928	--	5,446	--	5,327
	WYAK	--	1,049	1,049	0	--	1,037	--	1,014
	SEO	--	1,486	1,486	0	--	1,470	--	1,437
	Total		12,000	9,200	9,200	3,280	11,900	9,100	11,600

¹As published in the Federal Register. ²As of Oct. 28, 2006.

Note: Tables of ABCs, OFLs, and TACs published in the Federal Register are available for:

2005: http://www.fakr.noaa.gov/sustainablefisheries/specs05_06/goatable1.pdf

2006: http://www.fakr.noaa.gov/sustainablefisheries/specs06_07/goatable1.pdf