

4a. Gulf of Alaska Dover Sole (Executive Summary)

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4a.1 Introduction

Dover sole has been moved to a biennial stock assessment schedule to coincide with new survey data. On alternate (odd) 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 (Stockhausen et al. 2005, <http://www.afsc.noaa.gov/refm/docs/2005/GOADover.pdf>).

4a.2 Updated catch and projection

Dover sole is in Tier 3a. The only new information that is updated in the projection is the 2005 catch (407 t) and the best estimate of the 2006 catch (318 t, as of Sept. 23, 2006). As in the 2005 assessment, we used the average catch over the past 5 years (582 t) in place of that for 2006 in the projection model (Stockhausen et al., 2005). This was done because catch of Dover sole has been on a declining trend for the past several years. Using the average catch leads to a somewhat more conservative approach to estimating future biomass in the projection model than using the actual 2006 catch. For the 2007 fishery, we recommend the ABC of 8,524 t from the updated projection. This ABC is similar to last year's recommended ABC for 2007 of 8,494 t. The corresponding reference values for Dover sole are summarized below. The stock is not overfished, nor is it approaching overfishing status. The primary reference values are shown in the following table, 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>
$B_{40\%}$ (t)	21,607	21,607	21,607	21,607
Female Spawning Biomass (t)	41,922	42,262	42,398	43,030
F_{ABC} (maximum allowable= $F_{40\%}$)	0.142	0.142	0.142	0.142
F_{OFL} ($F_{35\%}$)	0.184	0.184	0.184	0.184
$ABC_{F40\%}$ (t yield at $F_{40\%}=F_{max}$)	8,482	8,494	8,524	8,800
OFL (t, yield at $F_{35\%}$)	10,764	10,778	10,817	11,168

4a.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:

	Western	Central	West Yakutat	Southeast Outside	Total
Area Apportionment	3.5	48.3	31.3	16.9	100
Area ABC (t)	299	4,115	2,665	1,444	8,524

4a.4 Research Priorities

The use of alternative selectivity functions in the assessment model is an area of active research. Data from the groundfish survey suggests that Dover sole in the path of the survey trawl exhibit a probability of capture that declines at larger sizes, rather than reaching an asymptote as is generally assumed. Differences in depth coverage among the groundfish surveys used in the assessment add a further complication to the use of “standard” selectivity curves such as the logistic. We are developing a spatially-explicit population model to address the impact of these issues on the current assessment approach.

4a.5 Summaries for Plan Team

Species	Year	Biomass ¹	OFL ²	ABC ²	TAC ²	Catch ²
	2005	130,000	8,490	6,820	6,820	407
Dover sole	2006	132,460	11,008	8,665	8,665	318
	2007	134,196	10,187	8,524		
	2008	135,552	11,168	8,800		

¹Total biomass from the age-structured model (2005) or the projection model (2006-2008). ²As published in the Federal Register (2005, 2006 for the deep-water flatfish complex) or as recommended based on the projection model (2007, 2008). ³As of Sept. 23, 2006.

Stock/ Assemblage	Area	2006				2007		2008	
		OFL ¹	ABC ¹	TAC ¹	Catch ³	OFL	ABC	OFL	ABC
Dover sole only	W	--	420	420	7	--	299	--	309
(Deep water flatfish)	C	--	4,139	4,139	320	--	4,115	--	4,249
	WYAK	--	2,661	2,661	11	--	2,665	--	2,751
	SEO	--	1,445	1,445	7	--	1,444	--	1,491
	Total	11,008	8,665	8,665	345	10,187	8,524	11,168	8,800

¹As published in the Federal Register for the deepwater flatfish complex. ²Deep water flatfish complex, as of Sept. 23, 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