

GROUND FISH MANAGEMENT TEAM RECOMMENDATIONS FOR THE RANGE OF 2005-06 HARVEST LEVELS

The Groundfish Management Team (GMT) considered the results of recently revised assessments for lingcod and cabezon, new cabezon harvest projections, and the range of rebuilding alternatives for bocaccio, cowcod, widow rockfish, and yelloweye rockfish to recommend a revised list of 2005 and 2006 ABCs and OYs for these species. The GMT attempted to capture the full range of harvest levels available using the revised lingcod and cabezon assessments as well as the full range of harvests specified in the Amendment 16-3 DEIS for bocaccio, cowcod, widow rockfish, and yelloweye rockfish. Revised Tables 1 and 2 of this report present the revised alternative ABCs and OYs for these six species and Table 3 in Exhibit C.8.b, Attachment 1 presents the cabezon harvest projections provided by Dr. Andre Punt. Revised Tables 1 and 2 present alternative harvest levels that are identical to those adopted for analysis by the Council in November 2003 with the following revisions:

Lingcod

The GMT referred to Table 6 on page 15 of the Addendum to the "Assessment of Lingcod for the Pacific Fishery Management Council in 2003" (presented in the March 2004 briefing book) and segregated lingcod ABCs and OYs north and south of the Columbia-Eureka INPFC management line. The range of lingcod OYs was based as follows: the ABC under the Low OY alternative is based on the new assessment adopted by the Council in March. The OY under the Low OY alternative is based on the harvest control rules ($F=0.0531$ in the north and south) adopted under Amendment 16-2 but applied to the exploitable biomasses projected for 2005 and 2006; $P_{MAX} = 70\%$ under the Medium OY alternative; and $P_{MAX} = 60\%$ under the High OY alternative.

Cabezon

The GMT referred to Table 3 in Exhibit C.8.b, Attachment 1, which provides cabezon harvest level projections based on the SSC-recommended model from the revised assessment, and ranged OYs as follows: the Low OY alternative assumes an $F_{50\%}$ harvest rate and a 60-20 precautionary adjustment (this is the precautionary adjustment that CDFG uses for nearshore species management); the Medium OY alternative assumes an $F_{45\%}$ harvest rate and a 60-20 precautionary adjustment with a constant catch averaged for 2005-07; and the High OY alternative assumes an $F_{45\%}$ harvest rate and a 40-10 precautionary adjustment.

Bocaccio

The GMT referred to tables presented in the Amendment 16-3 DEIS to range bocaccio ABCs and OYs as follows: the ABC/OY under the Low OY alternative assumed the STARb2 model with $P_{MAX} = 90\%$, the ABC/OY under the Medium OY alternative assumed the STATc model with $P_{MAX} = 70\%$, and the ABC/OY under the High OY alternative assumed the STARb1 model with $P_{MAX} = 60\%$.

Cowcod

The GMT referred to tables presented in the Amendment 16-3 DEIS to range cowcod ABCs and OYs as follows: P_{MAX} under the Low OY alternative is 60% and P_{MAX} under the High OY alternative is 55%.

Widow Rockfish

The GMT referred to tables presented in the Amendment 16-3 DEIS to range widow rockfish ABCs and OYs as follows: the ABC/OY under the Low OY alternative assumed model 7 with $P_{MAX} = 90\%$, the ABC/OY under the Medium OY alternative assumed model 8 with $P_{MAX} = 60\%$, and the ABC/OY under the High OY alternative assumed model 9 with $P_{MAX} = 60\%$.

Yelloweye Rockfish

The GMT referred to tables presented in the Amendment 16-3 DEIS to range yelloweye rockfish OYs as follows: P_{MAX} under the Low OY alternative is 90%, P_{MAX} under the Medium OY alternative is 70%, and P_{MAX} under the High OY alternative is 60%.

Canary Rockfish

The GMT recommends final harvest specifications for canary rockfish be deferred until June when management measures are decided since the OY depends on the commercial:recreational catch share.

Precautionary Adjustments for Pacific Cod, Other Flatfish, and Other Fish

The Council policy we have been operating under for some years regarding unassessed stocks and stocks with data-poor assessments, which is not limited to rockfish, has been to take a precautionary approach. Specifically, for unassessed stocks, the Council has adjusted OYs to 50% of the historical average catch levels. For stocks with data-poor assessments, the Council has applied a 25% reduction to the assessment value. The GMT notes that this has been done for most of the stocks that fall into these categories; however, the GMT recently discovered the precautionary adjustment has not been made to Pacific cod and species in the other flatfish and other fish categories. Therefore, the GMT recommends the OYs for Pacific cod, other flatfish, and other fish be reduced by 50%.

The ABCs for the Other Flatfish category have been based on landings from an earlier period. Recent review of landings data back to 1981 have led the GMT to question the derivation of the 7,700 mt ABC which has been in place since at least 1991. The GMT will require additional time to fully review this issue before it is prepared to recommend ABC and OY amounts for 2005-06. For the present motion we recommend the Council modify the lower end of the ABC range from 7,700 mt to 4,400 mt, and adjust the low OY from 3,850 mt to 2,200 mt. The GMT will finalize evaluation of this issue by the close of its May meeting, and will develop analysis of management measures appropriate for the revised range of OYs.

Amendment 16-2 Species

The harvests projected for canary rockfish, lingcod, darkblotched rockfish, and Pacific ocean perch are based on the rebuilding plans adopted under Amendment 16-2 (see discussion above). The target rebuilding year and harvest control rules for these species remain as adopted.

Amendment 16-3 Species

The GMT recommends the preferred harvest specifications for bocaccio, cowcod, widow rockfish, and yelloweye rockfish be made under agendum C.12 when rebuilding plans for these species are adopted.

Species With Status Quo Harvest Levels

The following species do not have updated assessments with 2005-06 projections and are recommended to be managed under status quo harvest levels: longspine thornyhead, petrale sole, chilipepper rockfish and splitnose rockfish.

Dover Sole

The Dover sole OY has been updated based on projections from the 2001 assessment. The GMT will determine the projected ABC before the June Council meeting.

Pacific Whiting

The Pacific whiting ABC (=OY) under the Medium OY alternative was based on projections from the recent assessment. The OY under the Low OY alternative was based on half the projected ABC and the OY under the High OY alternative was double the projected ABC. This is to explore widow rockfish bycatch implications.

REVISED TABLE 1. Groundfish Management Team-recommended alternatives for acceptable biological catches (ABCs) and total catch optimum yields (OYs) (mt) for 2005. (Overfished stocks in CAPS).

Stock	2004 ABCs/OYs		2005 ABC and OY Alternatives							
			Low OY		Med OY		High OY		Council OY a/	
	ABC	OY	ABC	OY	ABC	OY	ABC	OY	ABC	OY
LINGCOD - coastwide	1,385	735	2,922	918	2,922	2,588	2,922	2,636		
Columbia and US-Vanc. areas			1,874	574	1,874	1,874	1,874	1,874		
Eureka, Monterey, and Conception areas			1,048	344	1,048	714	1,048	762		
Pacific Cod	3,200	3,200	3,200	1,600			3,200	3,200		
PACIFIC WHITING (Coastwide)	514,441	250,000	181,287	181,287	362,573	362,573	725,146	725,146		
Sablefish (Coastwide)	8,487	7,786	8,368	6,500	8,368	7,761	8,368	8,335	8,368	7,761
North of Conception	8,185	7,510		6,270		7,486		8,040		7,486
Conception area	302	276		230		275		295		275
PACIFIC OCEAN PERCH	980	444			966	447			966	447
Shortbelly Rockfish	13,900	13,900			13,900	13,900			13,900	13,900
WIDOW ROCKFISH	3,460	284	2,833	0	3,218	285	3,668	505		
CANARY ROCKFISH b/	256	47	270	43	270	48	270	48	270	48
Chilipepper Rockfish	2,700	2,000			2,700	2,000			2,700	2,000
BOCACCIO	400	250	447	135	566	308	745	713		
Splitnose Rockfish	615	461			615	461			615	461
Yellowtail Rockfish	4,320	4,320			3,896	3,896			3,896	3,896
Shortspine Thornyhead	1,030	983			1,055	999			1,055	999
Longspine Thornyhead	2,461	2,461			2,461	2,461			2,461	2,461
S. of Pt. Conception	390	195			390	195			390	195
COWCOD (S. Concep)	5	2.4	5	2.1			5	2.4		
N. Concep & Monterey	19	2.4	19	2.1			19	2.4		
DARKBLOTCHED	240	240			269	269			269	269
YELLOWEYE	53	22	54	24	54	27	54	28		
Nearshore Species										
Black WA	540	540			540	540			540	540
Black OR-CA	775	775			753	753			753	753
Minor Rockfish North	3,680	2,250			3,680	2,250			3,680	2,250
Nearshore		122				122				122
Shelf		968				968				968
Slope		1,160				1,160				1,160
Remaining Rockfish North	1,612	1,216			1,612	1,216			1,612	1,216
Bocaccio	318	239			318	239			318	239
Chilipepper - Eureka	32	32			32	32			32	32
Redstripe	576	432			576	432			576	432
Sharpchin	307	230			307	230			307	230
Silvergrey	38	29			38	29			38	29
Splitnose	242	182			242	182			242	182
Yellowmouth	99	74			99	74			99	74
Other Rockfish North	2,068	1,034			2,068	1,034			2,068	1,034
Minor Rockfish South	3,412	1,968			3,412	1,968			3,412	1,968
Nearshore		615				615				615
Shelf		714				714				714
Slope		639				639				639
Remaining Rockfish South	854	689			854	689			854	689
Bank	350	263			350	263			350	263
Blackgill	343	306			343	306			343	306
Sharpchin	45	34			45	34			45	34
Yellowtail	116	87			116	87			116	87
Other Rockfish South	2,558	1,279			2,558	1,279			2,558	1,279
Cabezon (off CA only)	Managed under "Other Fish"		88	44	103	69	103	91		
Dover Sole	8,510	7,440			8510 c/	7476				
English Sole	3,100	3,100			3,100	3,100			3,100	3,100
Petrale Sole	2,762	2,762			2,762	2,762			2,762	2,762
Arrowtooth Flounder	5,800	5,800			5,800	5,800			5,800	5,800
Other Flatfish	7,700	7,700	4,400	2,200			12,000	12,000		
Other Fish d/	14,700	14,700	14,700	7,350			14,700	14,700		

a/ Council OY is the Council's preferred harvest alternative for 2005.

b/ The canary rockfish ABC and OY are based on the Council's adopted rebuilding strategy that has a rebuilding target year of 2074, a specified harvest control rule ($F = 0.220$), and conforms to a P_{MAX} (probability of successful rebuilding within the maximum allowable time period) of 60%. The OY varies by the commercial:recreational catch share due to the fact that the recreational fishery takes smaller fish and therefore has a greater "per ton" impact than the commercial fishery.

c/ The projected ABC for Dover sole is not currently available but will be estimated by the GMT before the June Council meeting

d/ The cabezon harvest specifications will be subtracted from the Other Fish complex by INPFC area.

REVISED TABLE 2. Groundfish Management Team-recommended alternatives for acceptable biological catches (ABCs) and total catch optimum yields (OYs) (mt) for 2006. (Overfished stocks in CAPS).

Stock	2004 ABCs/OYs		2006 ABC and OY Alternatives							
	ABC	OY	Low OY		Med OY		High OY		Council OY a/	
			ABC	OY	ABC	OY	ABC	OY	ABC	OY
LINGCOD - coastwide	1,385	735	2,716	940	2,716	2,414	2,716	2,459		
Columbia and US-Vanc. Areas			1,694	574	1,694	1,694	1,694	1,694		
Eureka, Monterey, and Conception areas			1,021	366	1,021	719	1,021	764		
Pacific Cod	3,200	3,200	3,200	1,600			3,200	3,200		
PACIFIC WHITING (Coastwide)	514,441	250,000	114,297	114,297	228,593	228,593	457,186	457,186		
Sablefish (Coastwide)	8,487	7,786	8,175	6,500	8,175	7,634	8,175	8,149	8,175	7,634
North of Conception	8,185	7,510		6,270		7,363		7,860		7,363
Conception area	302	276		230		271		289		271
PACIFIC OCEAN PERCH	980	444			934	447			934	447
Shortbelly Rockfish	13,900	13,900			13,900	13,900			13,900	13,900
WIDOW ROCKFISH	3,460	284	2,670	0	3,059	289	3,510	513		
CANARY ROCKFISH b/	256	47	279	45	279	51	279	51	279	51
Chilipepper Rockfish	2,700	2,000			2,700	2,000			2,700	2,000
BOCACCIO	400	250	443	140	549	309	733	704		
Splitnose Rockfish	615	461			615	461			615	461
Yellowtail Rockfish	4,320	4,320			3,681	3,681			3,681	3,681
Shortspine Thornyhead	1,030	983			1,077	1,018			1,077	1,018
Longspine Thornyhead	2,461	2,461			2,461	2,461			2,461	2,461
S. of Pt. Conception	390	195			390	195			390	195
COWCOD (S. Concep)	5	2.4	5	2.1			5	2.4		
N. Concep & Monterey	19	2.4	19	2.1			19	2.4		
DARKBLOTCHED	240	240			294	294			294	294
YELLOWEYE	53	22	55	25	55	28	55	29		
Nearshore Species										
Black WA	540	540			540	540			540	540
Black OR-CA	775	775			736	736			736	736
Minor Rockfish North	3,680	2,250			3,680	2,250			3,680	2,250
Nearshore		122				122				122
Shelf		968				968				968
Slope		1,160				1,160				1,160
Remaining Rockfish North	1,612	1,216			1,612	1,216			1,612	1,216
Bocaccio	318	239			318	239			318	239
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Minor Rockfish South	3,412	1,968			3,412	1,968			3,412	1,968
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Slope		639				639				639
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Bank	350	263			350	263			350	263
Blackgill	343	306			343	306			343	306
Sharpchin	45	34			45	34			45	34
Yellowtail	116	87			116	87			116	87
Other Rockfish South	2,558	1,279			2,558	1,279			2,558	1,279
Cabezon (off CA only)	Managed under "Other Fish"		94	63	108	69	108	107		
Dover Sole	8,510	7,440			8510 c/	7,564				
English Sole	3,100	3,100			3,100	3,100			3,100	3,100
Petrale Sole	2,762	2,762			2,762	2,762			2,762	2,762
Arrowtooth Flounder	5,800	5,800			5,800	5,800			5,800	5,800
Other Flatfish	7,700	7,700	4,400	2,200			12,000	12,000		
Other Fish d/	14,700	14,700	14,700	7,350			14,700	14,700		

a/ Council OY is the Council's preferred harvest alternative for 2006.

b/ The canary rockfish ABC and OY are based on the Council's adopted rebuilding strategy that has a rebuilding target year of 2074, a specified harvest control rule ($F = 0.220$), and comports to a P_{MAX} (probability of successful rebuilding within the maximum allowable time period) of 60%. The OY varies by the commercial:recreational catch share due to the fact that the recreational fishery takes smaller fish and therefore has a greater "per ton" impact than the commercial fishery.

c/ The projected ABC for Dover sole is not currently available but will be estimated by the GMT before the June Council meeting

d/ The cabezon harvest specifications will be subtracted from the Other Fish complex by INPFC area.