

GROUND FISH MANAGEMENT TEAM STATEMENT ON 2011-2012 HARVEST SPECIFICATIONS AND MANAGEMENT MEASURES

This statement covers 1) considerations on the Council's preliminary preferred decision on non-overfished species ACL and overfished species ACLs 2) management measures necessary to keep harvest within the preliminarily adopted limits and 2) trawl rationalization issues related to the 2011-2012 harvest specifications and management measures.

Harvest Specifications

Reductions from the ACL – Order of Operations

The term “set-asides” has been used to refer to the amounts of fish deducted “off the top” from the ACL (previously termed OY) and, for the whiting fishery, off the trawl sector. There has been some question about the flexibility that set-asides do or don't provide and whether they should be specified in regulation.

“Off the top” amounts

For the amounts of fish deducted “off the top” from the ACL, the regulations in the initial issuance proposed rule (75 FR 32994, 6/10/2010) based on amendment 21, state,

(b) Fishery harvest guidelines and reductions made prior to fishery allocations. Beginning with the 2011-2012 biennial specifications process and prior to the setting of fishery allocations, the OY is reduced by the Pacific Coast treaty Indian tribal harvest (allocations, set-asides, and estimated harvest under regulations at § 660.50); projected scientific research catch of all groundfish species, estimates of fishing mortality in non-groundfish fisheries and, as necessary, set-asides for EFPs. The remaining amount after these deductions is the fishery harvest guideline or quota. (note: recreational estimates are not deducted here).

Guidance from NMFS is that the research and incidental open access amounts are "estimates." The tribal amounts are a mix of allocations, set-asides, and estimated harvest under regulations at 660.50. The EFP numbers are "set-asides" (see 660.55(k)).

(k) Exempted fishing permit set-asides. Annual set-asides for EFPs described at § 660.60(f), will be deducted from the OY. Set-aside amounts will be adjusted through the biennial harvest specifications and management measures process.

The sum of these amounts (tribal, research, incidental open access, EFP) should be specified in regulation through the biennial specifications and management measures process so that it is clear how the fishery harvest guideline has been determined. Similarly, in cases where a commercial harvest guideline is specified, the recreational estimates should be documented so that it is clear how the commercial harvest guideline has been determined. However, these amounts that are deducted from the ACL to come up with the fishery harvest guideline are

somewhat flexible as long as the summed amount that is deducted from the ACL is not exceeded. For example, if research catch is higher than originally estimated, but incidental open access amounts are lower than expected and the sum of all amounts deducted from the ACL is not exceeded, no action needs to be taken.

The amount of fish deducted from the ACL to determine the fishery harvest guideline is not available to be allocated to other sectors (trawl or non-trawl). However, if either of those sectors (trawl or non-trawl) exceeds their allocation, or conversely, the amount of fish that comes “off the top” is exceeded, no sector is held harmless from that overage as stated in the Am 21 DEIS.

From Am 21 DEIS (p. 191)

6.3 Goals and Objectives of the Groundfish Strategic Plan

The Council adopted the Groundfish Strategic Plan, “Transition to Sustainability”, in the fall of 2000. The following are the general allocation goal and principles included in the strategic plan, which were also used as criteria for deciding intersector allocation alternatives, conducting analysis of those alternatives, and in deciding the final preferred alternative.

Strategic Plan Goal for Allocation

To distribute the harvestable surplus among competing interests in a way that resolves allocation issues on a long-term basis.

General Allocation Principles

1. All fishing sectors and gear types will contribute to achieving conservation goals (no sector will be held harmless). The fair and equitable standard will be applied to all allocation decisions but is not interpreted to mean exactly proportional impacts or benefits.

If either the trawl or non-trawl exceeds their allocation or an estimate or set-aside amount is exceeded, there is no harm as long as the ACL for that species is not exceeded.

Whiting set-asides

For the amounts deducted from the trawl allocation for the at-sea whiting fishery, they are “fishery set-asides,” and show up in the new Tables 1d and 2d in the initial issuance proposed rule. The at-sea whiting fishery set-asides are NOT available to any other fishery during the year (see 660.55(j)).

(j) Fishery set-asides. Annual set-asides are not formal allocations but they are amounts which are not available to the other fisheries during the fishing year. For the catcher/processor and mothership sectors of the at-sea Pacific whiting fishery, set-asides will be deducted from the limited entry trawl fishery allocation. Set-aside amounts will be specified in Tables 1a through 2d of this subpart and may be adjusted through the biennial harvest specifications and management measures process.

The methodology for apportioning and allocating catch from the specified harvest level is shown in Figure 1. Likewise Table 1 and Table 2 lays out the reductions off the top and the resulting

allocations for Amendment 21 species. The GMT notes that the Amendment 21 whiting allocations for widow, darkblotched, and POP are further divided pro-rata based on the sectors whiting allocations (i.e., 42% shoreside, 34% catcher-processor, 24% mothership). The two year 2011-2012 allocations of canary are also allocated on a two year basis pro-rata to the sector's allocation of whiting. Table 3 shows reductions and allocations for those species that are allocated every biennial management cycle. Table 4 shows the sablefish allocations, compared to the 2009-2010 cycle, based on the tentatively adopted ACL.

Am 6 v. Am 21 allocation structure

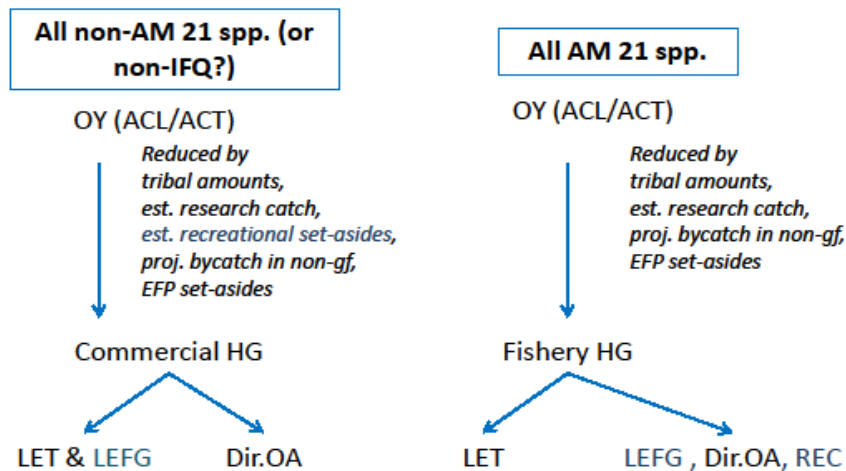


Figure 1. Comparison of distribution protocols for species allocated under Amendment 21 and all others.

Table 1. Reductions to harvest levels and resultant allocations under Amendment 21 for 2011.

Species/Species Group/Area	2011 PPA ACL/a	Tribal	EFP	Research	Incidental OA	Fishery HG	Trawl A21%	Non-trawl A21%	Trawl A21 mt	Non-Whiting A21 mt	Whiting A21 mt	Non-trawl A21 mt
Lingcod N. of 42° N latitude (OR & WA)	2,330	250	0	5	16	2,059	45%	55%	927	924	3	1,132
Lingcod S. of 42° N latitude (CA)	2,102	0	0	0	7	2,095	45%	55%	943	940	3	1,152
Pacific Cod	1,600	400	0	0	0	1,200	95%	5%	1,140	1,139	1	60
Sablefish S of 36° N. lat.	1,298	0	26	2	6	1,264	42%	58%	531	531	0	733
Dover sole	25,000	1497	0	38	55	23,410	95%	5%	22,240	22,240	0	1,171
English sole	19,761	91	0	5	4	19,661	95%	5%	18,678	18,659	19	983
PETRALE SOLE	976	45.4	2	17	1	911	95%	5%	865	865	0	46
Arrowtooth flounder	15,174	2041	0	7	30	13,096	95%	5%	12,441	12,441	0	655
Starry Flounder	1,352	2	0	0	5	1,345	50%	50%	673	673	0	673
Other flatfish	4,884	60	0	13	125	4,686	90%	10%	4,217	4,213	4	469
PACIFIC OCEAN PERCH	150	10.9	0.10	2	0	137	95%	5%	130	100	30	7
WIDOW	600	45	11	2	3	539	91%	9%	491	235	255	49
Chilipepper (coastwide)	2,130	1		9	5	2,115	75%	25%	1,586	1,586	0	529
Splitnose S. of 40°10' N lat.	1,461	0	0	7	0	1,454	95%	5%	1,381	1,381	0	73
Yellowtail N. of 40°10' N lat.	4,364	490	2	4	3	3,865	88%	12%	3,401	3,101	300	464
Shortspine thornyhead N. of 34 27' N. lat.	1,573	38	0	5	2	1,528	95%	5%	1,452	1,450	1	76
Shortspine Thornyhead S. of 34 27' N. lat.	405	0	0	1	41	363	50 mt	The Rest	50	50	0	313
Longspine thornyhead N. of 34 27' N. lat.	2,119	30	0	13	1	2,075	95%	5%	1,971	1,971	0	104
DARKBLOTCHED	298	0.1	2	2	15	279	95%	5%	265	240	25	14
Minor Slope Rockfish North 40°10' N lat.	1,160	36	2	11	19	1,092	81%	19%	885	872	12	207
Minor Slope Rockfish South 40°10' N lat.	626	0	2	8	17	599	63%	37%	377	377	0	222

a/ ACT for POP

Table 2. Reductions to harvest levels and resultant allocations under Amendment 21 for 2012.

Species/Species Group/Area	2012 PPA ACL/a	Tribal	EFP	Research	Incidental OA	Fishery HG	Trawl A21%	Non-trawl A21%	Trawl A21 mt	Non-Whiting A21 mt	Whiting A21 mt	Nontrawl A21 mt
Lingcod N. of 42° N latitude (OR & WA)	2,151	250	0	5	16	1,880	45%	55%	846	843	3	1,034
Lingcod S. of 42° N latitude (CA)	2,164	0	0	0	7	2,157	45%	55%	971	968	3	1,186
Pacific Cod	1,600	400	0	0	0	1,200	95%	5%	1,140	1,139	1	60
Sablefish S of 36 N. lat.	1,258	0	26	2	6	1,224	42%	58%	514	514	0	710
Dover sole	25,000	1497	0	38	55	23,410	95%	5%	22,240	22,240	0	1,171
English sole	10,150	91	0	5	4	10,050	95%	5%	9,548	9,538	10	503
PETRALE SOLE	1,160	45.4	2	17	1	1,095	95%	5%	1,040	1,040	0	55
Arrowtooth flounder	12,049	2041	0	7	30	9,971	95%	5%	9,472	9,472	0	499
Starry Flounder	1,360	2	0	0	5	1,353	50%	50%	677	677	0	677
Other flatfish	4,884	60	0	13	125	4,686	90%	10%	4,217	4,213	4	469
PACIFIC OCEAN PERCH	150	10.9	0.10	2	0	137	95%	5%	130	100	30	7
WIDOW	600	45	11	2	3	539	91%	9%	491	235	255	49
Chilipepper (coastwide)	1,924	1		9	5	1,909	75%	25%	1,432	1,432	0	477
Splitnose S. of 40°10' N lat.	1,538		0	7	0	1,531	95%	5%	1,454	1,454	0	77
Yellowtail N. of 40°10' N lat.	4,371	490	2	4	3	3,872	88%	12%	3,407	3,107	300	465
Shortspine thornyhead N. of 34 27' N. lat.	1,556	38	0	5	2	1,511	95%	5%	1,435	1,434	1	76
Shortspine Thornyhead S. of 34 27' N. lat.	401		0	1	41	359	50 mt	The Rest	50	50	0	309
Longspine thornyhead N. of 34 27' N. lat.	2,064	30	0	13	1	2,020	95%	5%	1,919	1,919	0	101
DARKBLOTCHED	296	0.1	2	2	15	277	95%	5%	263	238	25	14
Minor Slope Rockfish North 40°10' N lat.	1,160	36	2	11	19	1,092	81%	19%	885	872	12	207
Minor Slope Rockfish South 40°10' N lat.	626	0	2	8	17	599	63%	37%	377	377	0	222

a/ ACT for POP

Table 3. Reductions and allocations for species with two-year allocations for both 2011-2012 necessary for TIQ initial allocation.

Species/Species Group/Area	2011/2012 PPA ACL	Tribal	EFP	Research	Incidental OA	Fishery HG	Trawl SPEX %	Non-trawl SPEX %	Trawl SPEX mt	Within Trawl (%)		Within Trawl (MT)		Nontrawl SPEX mt
										Whiting	Non-whiting	Whiting	Non-whiting	
Longnose Skate	1,349	56		8	65	1,220	95%	5%	1,159	5%	95%	58	1101	61
Minor Shelf N. of 40 10' N. lat.	968	9	4	4	26	925	60.2%	39.8%	557	17.4%	82.6%	97	460	368
Minor Shelf S. of 40 10' N. lat.	714	0	2	2	9	701	12.2%	87.8%	86	N/A	N/A	N/A	N/A	615

Table 4. 2011-2012 Sablefish allocations compared to the 2009-2010 allocations.

Year	Sablefish OY N of 36° N lat	Tribal Share*	Research, Rec., EFP, and Inc. OA Set-Aside	Non- Tribal Comm. Share	LE Share	LE FG				OA Share
						LE Trawl Share	LE FG Share	LE FG Primary	LE FG DTL	
2009	7,052	705	200	6,147	5,569	3,230	2,339	1,988	351	578
2010	6,471	647	200	5,624	5,095	2,955	2,140	1,819	321	529
2011	5,515	552	39.3	4,924	4,461	2,588	1,874	1,593	281	463
2012	5,347	535	39.3	4,773	4,324	2,508	1,816	1,544	272	449

POP and Yelloweye ACTs for Rebuilding

The GMT finds the Council's use of ACTs for yelloweye and POP to be appropriate applications of the ACT concept. Before the Council action, we had planned on pointing out how the Council's existing approach to the rebuilding OYs has been based on a similar rationale as the ACT approach in the NS1 guidelines where management measures are set in manner that targets a lower amount than the OY or is designed to reduce the risk of catch variability leads to overages.

We do want to make the Council aware that we did see the POP catch reach 157 mt in 2007 when the OY was 150 mt in case that affects the Council's rationale for setting the specific ACT amount. The overage occurred because of late season whiting activity that year, which was unusual. This event was unexpected yet underscored the fact that POP does have the potential to affect the whiting sectors. In general, more POP would provide whiting vessels more leeway to operate deeper to avoid canary.

The GMT recommends evaluating the 157 mt catch of POP if the intent was to set the ACT at the highest catch seen in recent years.

Comparing Stock Status in Light of the Cowcod 2005 Stock Assessment Error

In our statement on rebuilding in Agenda Item B.3, we discussed how perceptions of a stock's status and biology and how they can change from cycle to cycle can turn more on uncertainty than on a real change in stock status. Sometimes the change can simply result from a mistake in the model.

This is exactly what occurred with cowcod. The change in our perception of the stock resulted from the 2007 assessment simply correcting an error from the 2005 assessment, which Council staff can explain if the Council wishes more detail.¹ We did not highlight this fact in our Agenda B.3 statement and do not know if the Council was aware of this situation when it tentatively adopted the cowcod ACL. It does not seem that the court was made aware of this error. Comparing current rebuilding results with a past mis-specified model does not seem appropriate.² If the error had been detected at the time, the rebuilding outlook would have been much different. If we are going to compare perceptions of stock status across time, then the original rebuilding plan would seem a more appropriate benchmark. Compared to the T_{TARGET} from that plan, the Council's 2009 T_{TARGET} was set 18 years earlier.

¹ As characterized by the SSC in their September 2008, "(g)ear selectivity, which had been mis-specified in the 2005 assessment, was corrected and revised."

² The 2007 assessment result indicated that cowcod could not be rebuilt by the target year specified under Amendment 16-4 (year 2039). Prior to the 2005 assessment, the Council had established a target rebuilding year of 2090 for cowcod rebuilding and specified a 4 mt OY as part of the original rebuilding plan. The Council's specification of 4 mt for 2009 and 2010 using the 2007 assessment also changed the target year to rebuild the cowcod stock to 2072, 18 years earlier than the original rebuilding plan. The Council's use of the best available science in the last management cycle did not change the OY, but rather the target year, which again, can be seen as inappropriately set under Amendment 16-4 based on the results of the incorrectly specified 2005 assessment model.

This is perhaps an extreme example of the potential pitfalls of focusing on what scientists call “noise” in our understanding of status and biology. Movements from rebuilding reference points should be answered to based on the needs of the fishing communities factor and an explanation of how different the delay is on the three dimensions that define stock status and biology. It may be that the “delay” is insignificant or that the needs of fishing communities is so compelling that the delay is justifiable.

This is also a good example to highlight how, in some sense, the needs of fishing community have to be looked at in isolation from changes in stock status and biology. We do not go into a full discussion of how changes in our perception of status and biology might influence the Council’s perception of the needs of fishing communities yet observe only that the perception may not change much even in the light of large differences in our perception of status and biology. What remains most important to the Council’s consideration of the needs of the fishing community factor is how one catch amount differs from another in the way it does or does not address the needs of fishing communities. We offer the observation that the contrast between 3 mt and 4 mt of cowcod has not changed since Amendment 16-4 or the 2009-10 cycle. The gist of the difference between 3 mt and 4 mt of cowcod involves another somewhat nuanced rationale based on the management uncertainty related to the “rare event” characteristics of cowcod. The variability and low encounter rates with cowcod mean that catch can swing considerably from year to year even when management measures are constant. In the past, the Council has chosen 4 mt not because it allowed more significant fishing opportunity than 3 mt, yet more because the Council was more confident that catch would not exceed 4 mt given the same or similar amount of fishing opportunity. Recent catch bears this out with estimated annual catch ranging from 0.5 mt to 3.5 mt (Table 5). An ACL/ACT approach like that tentatively adopted for yelloweye and POP would seem consistent with this level of management uncertainty.

The GMT recommends the Council consider whether the 2005 stock assessment error changes its rationale for tentatively adopting a cowcod ACL of 3 mt.

Table 5. Recent catches of cowcod taken directly from Table 3 of the rebuilding analysis.³ While not reported in this table, the 2008 total mortality estimate is less than 1.0 mt (reported as 1 mt in the Total Mortality Report and 13% of the 4 mt OY, which the GMT would report as 0.5 mt).

Year	Commercial (CalCOM)	Recreational (RecFIN)	Total Mortality Report	ABC	OY
2002	0.10	0.58	3.51	24	4.8
2003	0.05	--	0.32	24	4.8
2004	0.03	0.45	2.18	24	4.8
2005	0.04	0.15	1.27	24	4.2
2006	--	0.07	1.18	24	4.2
2007	0.40	0.20	3.20	36	4
2008	--	0.19	--	36	4

³ PFMC November 2009 Briefing Book, Agenda Item G.2.a, Attachment 3 Draft Cowcod Rebuilding Analysis.

Corrected Expected Rate of Increase Numbers

In Agenda Item B.3, we suggested looking at the expected rate of increase to contrast the rebuilding alternatives in manner that takes into account the different biology of the stocks. We still endorse the concept yet performed the calculation incorrectly in Agenda Item B.3.⁴ Mr. Anderson was given these corrected numbers when he spoke to his motion during Council action on that agenda item (Table 6).

Table 6. Corrected Expected Rate of Increase Calculations for the Council's Rebuilding Scenarios. We did not look at widow given that it is projected to be on the cusp of rebuilding.

Expected rate of increase	Canary	Yelloweye	Darkblotched	POP	Cowcod	Petrale	Bocaccio
F=0	3.4%	1.7%	3.8%	3.8%	4.0%	40.7%	4.0%
Alt 1	3.1%	1.2%	2.8%	3.8%	4.0%	40.7%	4.0%
Alt 2	2.9%	1.0%	1.9%	3.8%	3.7%	25.6%	3.6%
Alt 3	2.8%	0.9%	1.3%	3.4%	3.5%	21.6%	3.0%
As a % of the rate at F=0 of increase	Canary	Yelloweye	Darkblotched	POP	Cowcod	Petrale	Bocaccio
Alt 1	93%	67%	75%	100%	100%	100%	100%
Alt 2	87%	58%	50%	100%	93%	63%	90%
Alt 3	82%	50%	35%	90%	88%	53%	75%

Long-term Yield from the Yelloweye Rebuilding Analysis

In Agenda Item B.3 we made reference to a recent look at the yelloweye rebuilding scenarios similar to the analysis of petrale sole and made general statements about how the Council's rebuilding analysis were more likely to sacrifice long-term economic return for faster rebuilding than the other way around. Table 7 summarizes this analysis. Catch streams were constructed for each scenario from the median catch estimates from the rebuilding analysis (i.e., the predicted ACL). We changed the catch for each scenario to the estimated catch at B_{MSY} of 56.4 mt the year after the stock hit T_{TARGET} . Overall yield is the basic estimate of long-term economic return from the stock. The no fishing strategy would produce 1.1 percent more yield than Alternative 2 by the year 2080 yet the cost of that extra yield is three and a half decades of management restrictions meant to eliminate yelloweye bycatch to zero. Alternative 1 produces 0.7 percent more yield by 2080, yet, again, that small amount of yield so far into the future is inconsequential compared to the costs of fishing at that lower SPR harvest rate. Lastly, we noted that keeping that stock near current biomass levels by fishing at the SPR harvest rate of 0.50 (F_{MSY}) still produces 50 percent more expected yield by 2100 than the Council's tentatively adopted alternative.

⁴ In short, we forgot about compounding. The GMT thanks Dr. James Hastie for finding our error. The correct formula for calculating the expected annual rate of increase:

$$r = (B_{MSY} \text{ target}/\text{Current Biomass})^{1/n} - 1$$

where n is the number of years to T_{target} .

Table 7. Projected cumulative allowable catch (mt) of yelloweye rockfish by decade through 2100 for the Council’s three rebuilding alternatives and the F=0, 40-10, and F_{MSY} harvest rate scenarios (top panel); and that same cumulative catch expressed as a percentage difference from Alt 2 (bottom panel), the alternative tentatively adopted under Agenda Item B.3.PPA.⁵

Year	F=0	Alt 1	Alt 2	Alt 3	40-10	FMSY
2020	0	139	186	209	361	481
2030	0	297	394	440	757	959
2040	0	475	625	696	1,177	1,444
2050	169	674	880	976	1,621	1,933
2060	733	891	1,155	1,277	2,083	2,423
2070	1,297	1,289	1,452	1,599	2,563	2,916
2080	1,861	1,853	1,840	1,942	3,055	3,410
2090	2,425	2,417	2,404	2,423	3,559	3,906
2100	2,989	2,981	2,968	2,987	4,071	4,402

Year	F=0	Alt 1	Alt 2	Alt 3	40-10	FMSY
2020	0.0%	74.6%	--	112.3%	194.6%	258.8%
2030	0.0%	75.4%	--	111.8%	192.1%	243.5%
2040	0.0%	76.0%	--	111.4%	188.3%	230.9%
2050	19.2%	76.6%	--	110.9%	184.2%	219.7%
2060	63.5%	77.1%	--	110.5%	180.4%	209.8%
2070	89.4%	88.8%	--	110.2%	176.6%	200.9%
2080	101.1%	100.7%	--	105.5%	166.0%	185.3%
2090	100.9%	100.5%	--	100.8%	148.0%	162.5%
2100	100.7%	100.4%	--	100.6%	137.1%	148.3%

Recent Catch Histories of Petrale Sole Compared the Intersector Allocation

The GMT considered Council guidance to suspend the allocations under Amendment 21 while petrale is rebuilding. The GMT examined total non-trawl catch from the Amendment 21 DEIS and noted a marked decrease in catch in the non-trawl sectors beginning in 2004 (Figure 2). Whether this is the result of management constraints, such as RCA configurations, or improved total mortality accounting through the West Coast Groundfish Observer Program is unclear; however, the general reduction appears to have held for the last several years. As such, similar to the approach suggested by the GMT for other species' "off the top" estimates, the Council may want to establish an allocation such that it accommodates what may be expected in non-trawl sectors without needing to change the trawl allocation inseason or exceeding the ACL. As shown in Figure 2, the highest catch in recent years is 12.2 mt.

⁵ The rebuilding analysis can be found at PFMC November 2009 Briefing Book, Agenda Item G.2.a, Attachment 7 Rebuilding Analysis for Yelloweye Rockfish Based on the 2009 Stock Assessment. The median catch projections are truncated in that document. The author provided the team with the raw output, which includes the median catch streams by year through the year 2506.

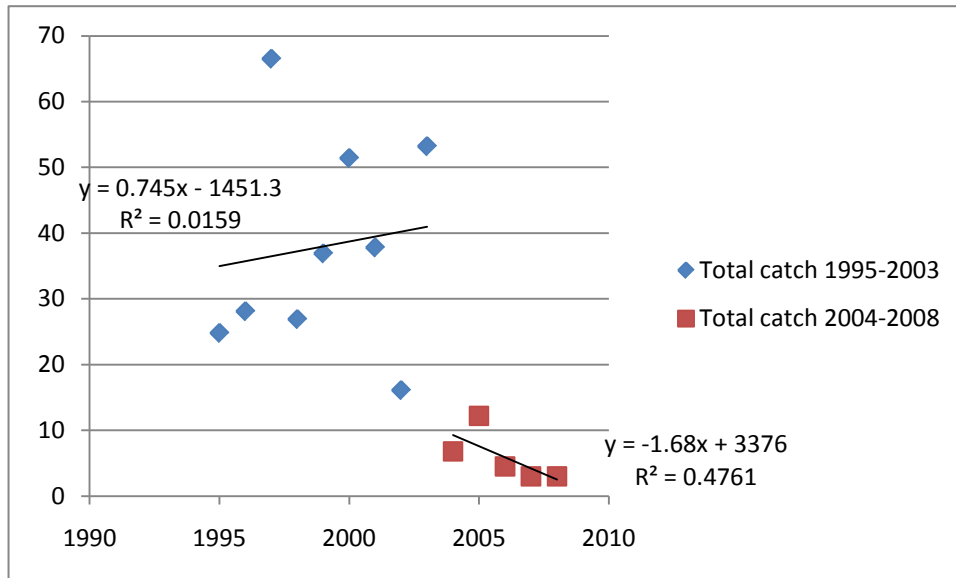


Figure 2. Non-trawl catch of petrale sole 1995-2008.

Blue Rockfish Harvest Guideline

In 2009-2010 blue rockfish was managed with a harvest guideline (HG) for California to prevent overfishing of a stock in the precautionary zone. The Council has adopted a default harvest policy for reducing catch below the ABC for species below B_{MSY} under Amendment 23 (the 40-10 rule). Table 8 shows the OFL, ABC, and 40-10 adjusted values for both the assessed and unassessed portion of the stock both north and south of 40° 10' N latitude within California. **The GMT recommends that the Council specify an HG for California of 241 mt in 2011 and 239 mt in 2012.**

Table 8. Harvest specification calculations for both the assessed and unassessed areas within California by year.

Species	OFL		ABC=ACL		ABC+40-10 adjustment =ACL/HG	
	2011	2012	2011	2012	2011	2012
Minor Nearshore Rockfish						
North	116	116	99	99	97	96
South	1156	1145	1001	990	983	971
California Blue rockfish						
North (assessed)	28	27	25	25	23	22
South (assessed)	191	190	175	173	156	154
Total assessed	219	217	200	198	179	177
S of 34°27' N lat.	74	74	62	62	62	62
TOTAL	293	291	262	260	241	239

Management Measures under the Council’s Preliminary Preferred Decision

The GMT analyzed the management measures necessary to keep total catch under the Council’s preliminary preferred decision for overfished species Table 9. As in past management cycles, it is anticipated that overfished species will constrain access to target species. Table 10 provides a more detailed look at how the Council’s preliminary preferred decision for the 2 year allocations of canary, cowcod, bocaccio, and yelloweye. The GMT did not have sufficient time to provide insight by fishery on how the balance of the 1.3 mt of yelloweye might best be utilized by each sector. I.e., how much additional target species could be accessed by sector given additional yelloweye.

The GMT notes that the trawl and non-trawl (includes recreational and commercial fixed gears) is the biggest decision relative to final action today since the trawl allocation will be transformed into quota shares and eventually quota pounds. The Council’s decision on the within non-trawl (between or among fixed gear commercial and recreational) is more fluid and can be changed through routine inseason actions. I.e., the final action here is to determine a reasonable set of management measures that constrain catches to within the amounts reserved for those fisheries. However, should those fisheries require more as a result of new information (e.g., bycatch rates or updated landings data), the two year allocations between the non-trawl sector can be adjusted.

Table 9. June 2010 Preliminary Preferred Decision for Overfished Species.

Stock	Alternative 4 - June 2010 PPA			
	2011 ACL	2012 ACL	2011 ACT	2012 ACT
BOCACCIO S. of 40°10' N latitude	263	274		
CANARY	102	107		
COWCOD S. of 40°10' N latitude	3	3		
<i>COWCOD (Conception)</i>				
<i>COWCOD (Monterey)</i>				
DARKBLOTCHED	298	296		
PACIFIC OCEAN PERCH	180	183	150	150
WIDOW	600	600		
YELLOWEYE	20	20	17	17
PETRALE SOLE	976	1,160		

Table 10. Projected impacts, harvest guideline, percentage of harvest guideline represented by projected impacts and residual yield between the projected impacts and the harvest guideline for each sector under the preliminary preferred overfished species ACL alternative.

Sector	Yelloweye (ACT = 17 mt, ACL = 20 mt)				Canary (ACL = 102 mt)				Bocaccio (ACL = 263 mt)				Cowcod (ACL = 3 mt)			
	Impacts	HG	% HG	Residual	Impacts	HG	% HG	Residual	Impacts	HG	% HG	Residual	Impacts	HG	% HG	Residual
Limited Entry Non-Whiting Trawl	0.2	0.6	33%	0.4	10.6	19.3	55%	8.7	7.2	19.3	37%	12.1	0.3	1.4	21%	1.1
Non-nearshore*	0.9				2.2				0.0	12.3	0%	12.3	NA	NA	NA	NA
LEFG	0.8	1.3	69%	0.4	1.9	2.3	96%	0.1								
OA DTL	0.1				0.3											
Nearshore Fixed Gear	0.7	0.7	100%	0.0	2.1	3.3	64%	1.2	0.3				NA	NA	NA	NA
Washington Recreational	2.5	2.6	96%	0.1	0.5	4.4	11%	3.9	NA	NA	NA	NA	NA	NA	NA	NA
Oregon Recreational	2.1	2.4	88%	0.3	2.4	14.5	17%	12.1	NA	NA	NA	NA	NA	NA	NA	NA
California Recreational	2.5	2.6	96%	0.1	9.3	17.7	53%	8.4	55.4	65.8	84%	10.4	0.17	1.4	12%	1.23
Limited Entry Whiting Trawl																
Catcher Processor	NA	NA	NA	NA	0.8	4.6	17.4%	3.8	NA	NA	NA	NA	NA	NA	NA	NA
Trawl Mothership	NA	NA	NA	NA	1.2	3.2	37.5%	2.0	NA	NA	NA	NA	NA	NA	NA	NA
Trawl Shoreside	NA	NA	NA	NA	3.7	5.7	64.9%	2.0	NA	NA	NA	NA	NA	NA	NA	NA
Total Residual				1.3				42.2				34.8				2.33

Sector	Yelloweye (ACT = 17 mt, ACL = 20 mt)				Canary (ACL = 107 mt)				Bocaccio (ACL = 274 mt)				Cowcod (ACL = 3 mt)			
	Impacts	HG	% HG	Residual	Impacts	HG	% HG	Residual	Impacts	HG	% HG	Residual	Impacts	HG	% HG	Residual
Limited Entry Non-Whiting Trawl	0.3	0.6	50%	0.3	10.8	19.3	56%	8.5	7.4	19.3	38%	11.9	0.3	1.4	21%	1.1
Non-nearshore*	0.8				2.1				0.0	12.3	0%	12.3	NA	NA	NA	NA
LEFG	0.7	1.3	62%	0.5	1.8	2.3	91%	0.2								
OA DTL	0.1				0.3											
Nearshore Fixed Gear	0.7	0.7	100%	0.0	2.2	3.3	67%	1.1	0.3				NA	NA	NA	NA
Washington Recreational	2.5	2.6	96%	0.1	0.5	4.4	11%	3.9	NA	NA	NA	NA	NA	NA	NA	NA
Oregon Recreational	2.1	2.4	88%	0.3	2.4	14.5	17%	12.1	NA	NA	NA	NA	NA	NA	NA	NA
California Recreational	2.5	2.6	96%	0.1	9.3	17.7	53%	8.4	55.4	65.8	84%	10.4	0.17	1.4	12%	1.23
Limited Entry Whiting Trawl																
Catcher Processor	NA	NA	NA	NA	0.8	4.9	16.3%	4.1	NA	NA	NA	NA	NA	NA	NA	NA
Trawl Mothership	NA	NA	NA	NA	1.2	3.4	35.3%	2.2	NA	NA	NA	NA	NA	NA	NA	NA
Trawl Shoreside	NA	NA	NA	NA	3.7	6.0	61.7%	2.3	NA	NA	NA	NA	NA	NA	NA	NA
Total Residual				1.3				42.8				34.6				2.33

COMMERCIAL

Non-nearshore fixed gear model

Bycatch projections for the open access and limited entry fixed gear sectors are given in Table 11. The projections for these scenarios contained errors when we presented them in Agenda Item B.3. Further, we note that the open access DTL yelloweye impacts were presented alongside the open access nearshore fishery. Since the limited entry fixed gear and the open access DTL impacts are estimated from the same model, the GMT's scorecard will represent those impacts together. This is similar to how we have treated canary rockfish impacts between these two sectors. I.e., canary impacts in the limited entry fixed gear and the open access DTL impacts are shown in the row labeled "non-nearshore" while the nearshore impacts are listed in the row labeled "nearshore". **The GMT believes that it is logically consistent to keep impacts from the same model and fishery together when representing impacts in the scorecard.**

Yelloweye rockfish is the key constraining stock for the non-nearshore fixed gear sectors. The Council's tentatively adopted yelloweye ACT would leave a combined surplus of 0.4 mt in 2011 and 0.5 mt in 2012. The Council may wish to direct to another fishery or keep as a residual in the scorecard to reduce the risk that actual catch exceeds the projections from this and other models (i.e., account for management uncertainty).

We can only speak qualitatively to the management uncertainty arising from this model. The numbers in Table 11 best estimates of bycatch for this fishery, yet of course, bycatch rates may always change. Yelloweye bycatch rates in these fixed gear sectors have remained relatively stable over recent years, with the lowering of the bycatch projections resulting from the decreasing sablefish ACLs. The GMT projections from this model have been conservative in recent years, in part because of the assumption that the fixed gear sablefish allocations are fully harvested.⁶ This assumption may be less conservative in 2011-12 because of the lower sablefish ACLs and the fact that the inseason changes to the DTL trip limits the Council has made over this cycle have increased the likelihood that a higher portion of the allocations for those sectors will be taken. Of course, we monitor sablefish landings inseason and will recommend that the Council take inseason action if necessary to keep the sablefish allocations from being exceeded. The Council has not contemplated liberalizing the RCA boundaries to something shallower than 100 fm since 2002. Bycatch of yelloweye and other rockfish would certainly increase inside 100 fm, yet we cannot model by how much. In other words, we cannot analyze how additional yelloweye could benefit these sectors and we won't get any new data unless the areas are reopened to fishing. We only note this because these sectors may seem better off compared to the status quo in terms of RCA configurations. Yet the 100 fm line certainly closes large areas of the shelf to fishing and has resulted in adverse economic impacts (e.g., increased travel distance, limited seasonal access to dogfish, etc.). Unlike with other models, we cannot contrast what the incremental benefit additional yelloweye would have for this fishery.

⁶ In contrast to models that apply bycatch rates to actual landings throughout the year, this model applies the bycatch rates to the full sablefish allocation.

Lastly a note on how we model bycatch in these fisheries and our preference for reporting these sectors together in the scorecard as the non-nearshore fixed gear sectors. Changes to the way we classify sectors in the scorecard can cause confusion if not documented. For example, as the Council is aware, this change caused some confusion among the team in our interpretation of the Council direction for analyzing the nearshore model.⁷ Although we report bycatch projections separately for the two sectors, the sectors are effectively combined for bycatch projection purposes. Each sector's portion of the bycatch is simply pro rata (in proportion to) to their respective sablefish allocations. We model bycatch for the two sectors combined because the Council manages the two with the same RCA boundaries, the primary management measure for controlling bycatch in these fisheries. To treat the sectors separately, the Council would set separate seaward boundaries (e.g., allow one to fish according to the 100 fm and the other to fish seaward of the 125 fm). If the Council ever chose to do so, we could certainly break out the sectors in the scorecard. The Council has not done so before primarily because of enforceability concerns. We have not analyzed differential RCAs for open access and limited entry and do not see any need for the Council to consider doing so at this time. Further, we believe that Enforcement would have concerns over such a proposal.

Table 11. Bycatch projections for the non-nearshore fixed gear sectors under the Council's tentatively adopted ACLs and ACTs. These tables correct the equivalent tables given in Agenda Item B.3., Supplemental GMT Report 4.

Option 1: With status quo RCA boundaries: Columbia-Eureka to Cascade Head at 125 fm

	2011			2012		
	LE	OA	Total	LE	OA	Total
Bocaccio	0.0	0.0	0.0	0.0	0.0	0.0
Canary rockfish	2.1	0.3	2.4	1.8	0.3	2.2
Darkblotched rockfish	3.8	0.8	4.6	3.5	0.8	4.3
Pacific ocean perch	0.3	0.1	0.4	0.3	0.1	0.3
Widow rockfish	0.0	0.0	0.1	0.1	0.0	0.1
Yelloweye rockfish	0.7	0.1	0.8	0.6	0.1	0.7

Option 2: With RCA boundaries N. of 40° 10' N. latitude at 100 fm

	2011			2012		
	LE	OA	Total	LE	OA	Total
Bocaccio	0.0	0.0	0.0	0.0	0.0	0.0
Canary rockfish	1.9	0.3	2.2	1.8	0.3	2.1
Darkblotched rockfish	3.5	0.8	4.3	3.4	0.8	4.2
Pacific ocean perch	0.3	0.1	0.4	0.3	0.1	0.4
Widow rockfish	0.1	0.0	0.1	0.1	0.0	0.1
Yelloweye rockfish	0.8	0.1	0.9	0.7	0.1	0.8

⁷ The confusion relates to the way we used to report the open access DTL bycatch together with the nearshore fisheries as "OA Directed."

Limited Entry Sablefish DTL North of 36° N. Latitude

The GMT discussed adjustments to the cumulative landing limits for Limited Entry Fixed Gear Daily Trip Limit (LEFG-DTL) sablefish. The purpose of these adjustments are (a) to ensure that the season will continue throughout the year and (b) ensure that the fishery reaches or comes close to reaching their allocation of sablefish. A new model developed by the GMT to project landings based on trip limits was described under Agenda Item B.5.b, Supplemental GMT Report 2, June 2010.

The adjustments described herein accommodate the lower ACLs under the Council preferred alternative (2011 - 5,515 mt; 2012 – 5,347 mt). Allocations for LEFG-DTL sablefish are 281 mt and 272 mt for 2011 and 2012, representing reductions of approximately 40 mt relative to 2010. Representatives from the LEFG-DTL sablefish fishery requested lower landing limits during the first and sixth periods when weather is typically poorest.

The GMT recommends the following bi-monthly cumulative limit for the LEFG-DTL sablefish beginning January 1, 2011:

Period 1 = 6,500 lb per two months

Period 2 = 7,500 lb per two months

Period 3 = 7,500 lb per two months

Period 4 = 7,500 lb per two months

Period 5 = 7,500 lb per two months

Period 6 = 6,000 lb per two months

The GMT recommends no daily limit for the proposed trip limit structure. Should the Council wish to implement a daily limit, limits could be implemented through routine inseason action since it is analyzed in the SPEX. Further, the Council could implement weekly limits, should it be necessary, since it was also analyzed in the SPEX.

Sablefish in the Conception Area (south of 36° N lat)

Under Agenda Item B.3.b, Supplemental GMT Report 4, the GMT requested Council guidance on whether or not they wanted the limited entry sector to have greater access than open access (i.e., differential trip limits). The Council provided the following guidance: (1) similar trip limits in both sectors, (2) preference to limited entry taking into account historical and current sector activities, and (3) analyze elimination of the daily trip limit in the limited entry sector. The following trip limit modeling was made assuming the Council's tentatively adopted ACL resulting in 753 mt non-trawl sablefish for 2011 and 730 mt for 2012.

Similar trip limits for limited entry and open access

Due to the limited available time, the GMT was unable to do any in-depth modeling using actual vessel histories to inform what an equal trip limit would be. We did some preliminary modeling making the following assumptions: the number of limited entry and open access participants (43 and 71) in 2009 is the same as 2010 and that everyone maximized fishing opportunities. The

GMT realizes that these are major assumptions and could be refined in future models. As such, if the Council chose to set equal trip limits for both sectors then a ~280 lb/week would keep these fisheries within their non-trawl allocation in 2011 and 2012. If the Council adopted equal trip limits as their preferred trip limit structure then the GMT would work to refine these trip limits and have it published for the proposed rule.

Preference for limited entry

The GMT analyzed catches of limited entry and open access from the years 2000-2009 (Table 12) to help inform historical levels of participation favoring the limited entry sector. The GMT used the proportions of harvest relative to 2000-2005 with limited entry getting 80% and open access, 20% since these years were more favorable to the limited entry sector.

Table 12. Limited entry and open access sablefish landings in the Conception Area from 2000-2009.

Fleet	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Avg '00-'09	Avg '00-'05
Limited entry	71.54	99.18	111.68	109.11	76.98	72.74	62.87	69.62	107.35	307.59	1,088.67	541.24
Open access	14.11	13.79	28.92	31.95	26.17	16.94	116.79	115.78	93.89	437.60	895.94	131.88
Fleet total	85.66	112.97	140.60	141.06	103.15	89.68	179.66	185.39	201.24	745.20	1,984.61	673.12
LE%	83.5%	87.8%	79.4%	77.3%	74.6%	81.1%	35.0%	37.6%	53.3%	41.3%	54.9%	80.4%
OA%	16.5%	12.2%	20.6%	22.7%	25.4%	18.9%	65.0%	62.4%	46.7%	58.7%	45.1%	19.6%

If the Council chose to structure trip limits using this scenario, the limited entry fixed gear trip limit would be at least 5,000 lb/week, with no daily limit. The GMT was unable to model trip limits for the open access sector due to the available time and the more complex trip limit structure (daily, weekly, and bi-monthly limit). Since the sablefish available to the open access sector under this option would be far less than landings in 2009, trip limits would have to be greatly reduced. If the Council adopted a trip limit structure giving preference to the limited entry sector, then the GMT would work to refine trip limits for the limited entry and open access fisheries and have it published for the proposed rule

Open Access Nearshore Model

In Agenda Item B.3.a Attachment 1 there are some errors in the model descriptions. For clarification, the model inputs are

- No action: uses projected 2010 landings that were estimated at the September 2009 Council meeting as well as the 2008 West Coast Groundfish Observer Program bycatch rates that were updated in March 2010.
- Alternative 1: uses **reduced** average landings from 2007-2009 for Oregon and 2006-2008 for California along with the 2008 bycatch data.
- Alternatives 2 and 3: based on reductions from Alternative 1 for the average landings from 2007-2009 for Oregon and 2006-2008 for California along with the 2008 bycatch data.

The no action alternative (as defined above) provided in Table 5 represents 2009 landings. The starting point provided in Table 13 represents the 2007-2009 average landings for Oregon and 2006-2008 for California of nearshore species with the depth restrictions. All alternatives (i.e., percent reductions) in the EIS were compared to this column (= “Starting Point”, which was not presented in the draft EIS). A column is included between them that we provide as another point of comparison is similar to the starting point for expected landings (2007-2009 or 2006-2008 average landings), but illustrate estimated impacts to overfished species when moving the RCA to 30 fm north of 40° 10’ N latitude.

Under, the tentatively adopted yelloweye ACT the nearshore fishery will be severely constrained. The 20 fm depth restrictions implemented in 2009 between 40° 10’ N latitude and 43° N latitude will have to remain in effect to reduce yelloweye impacts. Under this harvest level neither Oregon nor California will be able to maintain a status quo (2009) fishery.

Impacts are shown for two catch-sharing proportions between the states of Oregon and California – 50% OR:50% CA sharing plan and a 55% OR:45% CA catch sharing plan. The GMT analyzed two potential yelloweye catch sharing options, 50:50 and 55:45. The rationale for these two options is described in Appendix C, Description of Catch Projection Models (Agenda Item B.3.a, Supplemental Attachment 6). Simply, the GMT looked at a simple equal sharing option (50:50) and one informed by the yelloweye stock assessment (55:45).

Oregon is constrained by yelloweye under both alternatives. Annual landings would need to be reduced by 48% to 63% (94–104 mt) from the “Starting Point” of 210 mt to accommodate cuts under either of the new catch sharing plans. Yelloweye rockfish impacts for Oregon under a 17 mt yelloweye ACT are 0.36 and 0.4 mt. Hence, the Oregon nearshore fishery requires an

additional 0.4 to 0.5 mt to return to “normal” landing levels for depths < 20 fm (i.e., no action alternative or starting point). Table 14 shows nearshore landings by year for each modeled area.

In addition to being constrained by yelloweye, California will also be constrained by canary due to the presence of two high bycatch areas (one north of 40°10' and the other south of 40°10'). Under the 17 mt yelloweye ACT, the California nearshore fishery will not reach its yelloweye target because it will first be constrained by canary. As a result, minor reductions to landed catch must occur for some species to stay within allowable targets. California will be able to maximize cabezon landings under this alternative because the majority of the cabezon catch is taken in shallow depths where bycatch rates are low. If this fishery had access to additional canary, it could maximize its yelloweye target resulting in less reductions to landed catch.

With an additional 0.2 mt of yelloweye, the reductions to landed catch would be less severe for Oregon. With an additional 0.4 mt of yelloweye, this fishery could increase landings and attain average levels seen between 2007-2009 for Oregon and 2006-2008 for California.

Table 13 Nearshore model results by area for the tentatively adopted ACT compared to reference points.

	No Action	Comparison Point	Starting Point	Tentatively Adopted ACT	
	Sept 2009 final landings	30 fm in most areas	20 fm in some areas	17 mt	17 mt
Yelloweye Catch Sharing				50:50 catch sharing	55:45 catch sharing
Nearshore yelloweye		Provided only for	**Alternatives were	0.7 mt	
State targets (OR:CA)		Comparison - Not	Relative to this	0.37	0.4/0.3
		Requested	Standard **		
OR	Sept 2009 Landings; 20 fm depth between 42° and 43° only, 30 fm north of 43	2007-2009 Avg Landings; 30 fm statewide	2007-2009 Avg Landings; 20 fm depth between 42° and 43° only, 30 fm north of 43°	2007-2009 Avg Landings; 20 fm between 42° and 43°, 30 fm north of 43°, Reductions of 53% (black rf & greenling), 63% others	20 fm, Reductions of 48% (black rf & greenling), 58% others
CA	Sept 2009 Landings; 20 fm between 42° and 40°10' only, SQ south of 40°10'	2006-2008 Avg landings; 30 fm depth; 60 fm south of 34°27'	2006-2008 Avg landings; 20 fm between 42° and 40°10' only, SQ south of 40°10'	2006 - 2008 Avg Landings; 20 fm depth; 60 fm south of 34°27'; catch reduction for some species, maximum cabezon	20 fm between 42° and 40°10' only, increased blacks in north, Statewide - maximum cabezon
OREGON					
<i>NORTH of 42° N. lat.</i>					
Black rockfish	139	110	110	52	57
Blue rockfish	3	3	3	1	1
Cabezon	17	17	17	9	11
Kelp greenling	20	20	20	9	10
Lingcod	50	50	50	19	21
Other minor nearshore rockfish	8	10	10	4	4
CALIFORNIA					
<i>42° to 40°10' N. lat.</i>					
Black rockfish	120	73	73	73	90
Blue rockfish	19	13	13	8	10
Cabezon	2	3	3	6	7
Kelp greenling	0	0	0	0	0
Lingcod	12	15	15	15	15
Other minor nearshore rockfish	10	10	10	6	8
<i>SOUTH of 40°10' N. lat.</i>					
Black rockfish	4	3	3	2	3
Blue rockfish	5	7	7	5	7
Cabezon	20	23	23	63	63
Deeper nearshore rockfish	37	29	29	20	29
Kelp greenling	1	1	1	1	1
Lingcod	18	21	21	21	21
Shallow nearshore rockfish	60	51	51	36	51
Overfished Species					
Canary rockfish					
OR	0.9	0.9	0.8	0.3	0.38
CA - 42 to 40°10'	1.0	1.0	0.7	0.7	0.79
CA - south of 40°10'	1.5	1.3	1.3	1.1	1.38
Yelloweye rockfish					
OR	0.9	1.0	0.8	0.36	0.4
CA - 42 to 40°10'	0.3	0.9	0.2	0.27	0.2
CA - south of 40°10'	0.1	0.1	0.1	0.08	0.1

****Table 13 correction: Under No Action: the description “Sept 2009 final landings” is incorrect: uses projected 2010 landings that were estimated at the September 2009 Council meeting as well as the 2008 West Coast Groundfish Observer Program bycatch rates that were updated in March 2010.**

Table 14. Past years' nearshore landings by species and year for each modeled area.

	Species	Year and MT landed			
		2006	2007	2008	2009
OREGON					
	Black rockfish	92.9	101.1	98.3	130.5
	Blue rockfish	4.7	4.2	2.7	2.8
	Minor nearshore rockfishes	8.1	8.4	10.7	11.3
	Cabazon	22.0	21.9	24.7	29.8
	Kelp greenling	14.5	18.3	21.9	20.6
	Lingcod	43.6	49.4	57.3	44.2
CALIFORNIA - 40°10' to 42° N lat					
	Black rockfish	58.2	79.5	80.9	89.1
	Blue rockfish	10.4	6.9	21.8	2.5
	Other minor nearshore rockfish	7.4	11.3	10.3	2.3
	Cabazon	2.6	3.0	2.4	1.8
	Kelp greenling	0.2	0.3	0.3	0.3
	Lingcod	12.1	15.5	17.0	8.1
CALIFORNIA - 40°10' to 42° N lat					
	Black rockfish	3.4	4.0	2.2	4.0
	Blue rockfish	8.6	6.5	5.4	2.6
	Shallow nearshore rockfishes	46.6	52.3	55.0	47.3
	Deeper nearshore rockfishes	28.1	28.7	29.3	27.4
	Cabazon	25.6	22.4	20.8	15.5
	Kelp greenling	1.4	1.2	1.1	1.1
	Lingcod	24.0	20.9	19.2	15.7

Limited Entry Trawl Non-whiting

Limited entry trawl total fishing mortality was projected using the Trawl Bycatch Model (Hastie, 2003) in 2011 and 2012 for major target and rebuilding species, using landings data from Periods 1 and 2 of 2010 reported to PacFIN as of May 19th, 2010. Weighted average bycatch estimates used were calculated for years 2006 through 2009, from observer and fish ticket data. Bycatch and shifts in fishing effort by depth, area and period influence results of accompanying species trip limits and RCA boundaries.

Petrale sole will be managed as an overfished stock under a rebuilding plan in 2011 and 2012. Thus, the Council is managing to a 976 mt ACL in 2011 and 1160 mt ACL in 2012. The petrale sole ACL is constraining in the non-whiting LE trawl fishery, and proposed trip limits were reduced to 4900 lbs per bimonthly period to limit projected total fishing mortality within the model target. The seaward RCA line was also set at 200 fathoms in periods 1, 2, 5, and 6; and at the split 150/200 fathom line in the area north of 40°10' for this purpose. In the south, the RCA was set between 100 and 200 fathoms in periods 1 and 2 and between 100 and 150 fathoms in periods 2 through 5.

A Dover sole ACL of 25,000 mt was adopted by the Council for 2011 and 2012, which allows a significantly higher utilization than in 2010. The proposed bimonthly trip limit for long footrope gear was raised from 110,000 lbs in 2010, but was capped at 150,000 lbs to allow increased stock utilization without a major market disturbance. Sablefish ACLs allowed more liberal trip limits in 2011 than 2012.

Trip limits and RCA structures under the tentatively adopted ACLs and ACTs, can be found in Table 15 and Table 16. The associated overfished and non-overfished species impacts are in Table 17 and Table 18. **All model runs assume that the area north of Cape Alava remains closed. However, the team has analyzed a model run with north of Cape Alava being open such that, should new trawl canary and yelloweye bycatch rates be lower, the Council could open that area through a routine inseason adjustment.** The GMT notes that there may be concerns with the 6,000 lbs/2 month limits for slope rockfish based on feedback from the GAP and the need to reduce the limit from that amount inseason this year. However, lower limits are in the range analyzed and can be included in the package submitted for the proposed rule. If the Council wishes to start the year with lower slope rock trip limits the

Table 15. Proposed non-whiting limited entry trawl target species' trip limits and RCA boundaries for 2011.

2-month period	RCA lines (fm)		2-month cumulative-poundage limits							
	shallow	Deep	sable-fish	long-spine	short-spine	Dover sole	petrale sole	arrow-tooth	other flatfish	slope rockfish
N. of 40°10' N lat.										
Large/small footrope limits										
1	75	200	15,500	20,000	17,000	150,000	4,900	150,000	110,000	6,000
2	75	200	15,500	20,000	17,000	150,000	4,900	150,000	110,000	6,000
3	75	150/200	15,500	20,000	17,000	150,000	4,900	150,000	110,000	6,000
4	75	150/200	15,500	20,000	17,000	150,000	4,900	150,000	110,000	6,000
5	75	200	15,500	20,000	17,000	150,000	4,900	150,000	110,000	6,000
6	75	200	15,500	20,000	17,000	150,000	4,900	150,000	110,000	6,000
Selective gear limits										
1	75	200	8,000	5,000	5,000	65,000	4,900	90,000	60,000	
2	75	200	8,000	5,000	5,000	65,000	4,900	90,000	60,000	
3	75	150/200	8,000	5,000	5,000	65,000	4,900	90,000	60,000	
4	75	150/200	8,000	5,000	5,000	65,000	4,900	90,000	60,000	
5	75	200	8,000	5,000	5,000	65,000	4,900	90,000	60,000	
6	75	200	8,000	5,000	5,000	65,000	4,900	90,000	60,000	
38° - 40°10' N lat.										
1	100	200	15,500	20,000	17,000	150,000	4,900	10,000	110,000	15,000
2	100	150	15,500	20,000	17,000	150,000	4,900	10,000	110,000	15,000
3	100	150	15,500	20,000	17,000	150,000	4,900	10,000	110,000	15,000
4	100	150	15,500	20,000	17,000	150,000	4,900	10,000	110,000	15,000
5	100	150	15,500	20,000	17,000	150,000	4,900	10,000	110,000	15,000
6	100	200	15,500	20,000	17,000	150,000	4,900	10,000	110,000	15,000
S. of 38° N lat.										
1	100	200	15,500	20,000	17,000	150,000	4,900	10,000	110,000	55,000
2	100	150	15,500	20,000	17,000	150,000	4,900	10,000	110,000	55,000
3	100	150	15,500	20,000	17,000	150,000	4,900	10,000	110,000	55,000
4	100	150	15,500	20,000	17,000	150,000	4,900	10,000	110,000	55,000
5	100	150	15,500	20,000	17,000	150,000	4,900	10,000	110,000	55,000
6	100	200	15,500	20,000	17,000	150,000	4,900	10,000	110,000	55,000

Table 16 Proposed non-whiting limited entry trawl target species' trip limits and RCA boundaries for 2012.

2-month period	RCA lines (fm)		2-month cumulative-poundage limits							
	shallow	Deep	sable-fish	long-spine	short-spine	Dover sole	petrale sole	arrow-tooth	other flatfish	slope rockfish
N. of 40°10' N lat.										
Large/small footrope limits										
1	75	200	14,500	20,000	17,000	150,000	6,500	150,000	110,000	6,000
2	75	200	14,500	20,000	17,000	150,000	6,500	150,000	110,000	6,000
3	75	150/200	14,500	20,000	17,000	150,000	6,500	150,000	110,000	6,000
4	75	150/200	14,500	20,000	17,000	150,000	6,500	150,000	110,000	6,000
5	75	200	14,500	20,000	17,000	150,000	6,500	150,000	110,000	6,000
6	75	200	14,500	20,000	17,000	150,000	6,500	150,000	110,000	6,000
Selective gear limits										
1	75	200	8,000	5,000	5,000	65,000	6,500	90,000	60,000	
2	75	200	8,000	5,000	5,000	65,000	6,500	90,000	60,000	
3	75	150/200	8,000	5,000	5,000	65,000	6,500	90,000	60,000	
4	75	150/200	8,000	5,000	5,000	65,000	6,500	90,000	60,000	
5	75	200	8,000	5,000	5,000	65,000	6,500	90,000	60,000	
6	75	200	8,000	5,000	5,000	65,000	6,500	90,000	60,000	
38° - 40°10' N lat.										
1	100	200	14,500	20,000	17,000	150,000	6,500	10,000	110,000	15,000
2	100	150	14,500	20,000	17,000	150,000	6,500	10,000	110,000	15,000
3	100	150	14,500	20,000	17,000	150,000	6,500	10,000	110,000	15,000
4	100	150	14,500	20,000	17,000	150,000	6,500	10,000	110,000	15,000
5	100	150	14,500	20,000	17,000	150,000	6,500	10,000	110,000	15,000
6	100	200	14,500	20,000	17,000	150,000	6,500	10,000	110,000	15,000
S. of 38° N lat.										
1	100	200	14,500	20,000	17,000	150,000	6,500	10,000	110,000	55,000
2	100	150	14,500	20,000	17,000	150,000	6,500	10,000	110,000	55,000
3	100	150	14,500	20,000	17,000	150,000	6,500	10,000	110,000	55,000
4	100	150	14,500	20,000	17,000	150,000	6,500	10,000	110,000	55,000
5	100	150	14,500	20,000	17,000	150,000	6,500	10,000	110,000	55,000
6	100	200	14,500	20,000	17,000	150,000	6,500	10,000	110,000	55,000

Table 17. Projected impacts of the proposed non-whiting trawl limits for 2011.

Species	Projected Total Catch (mt)		Projected Total	Harvest Guideline (mt)	Proj. - HG (mt)	Proj. % of HG
	North of 40°10'	South of 40°10'				
	Sablefish	2,239				
Longspine	1,091	250	1,341	1,971	-631	68.0%
Shortspine	1,246	141	1,387	1,450	-63	95.7%
Dover sole	15,905	1,805	17,710	22,240	-4,529	79.6%
Arrowtooth	5,509	15	5,524	12,441	-6,918	44.4%
Petrале sole	693	158	851	865	-14	98.4%
English sole	382	76	458	18,659	-18,201	2.5%
Other flatfish	684	186	870	4,213	-3,343	20.6%
Canary	9.2	1.4	10.6	20.5	-9.9	51.7%
POP	90.2	0.2	90.4	100.3	-9.9	90.1%
Darkblotched	151.4	19.2	170.6	240.3	-69.7	71.0%
Widow	6.0	8.8	14.9	235.5	-220.6	6.3%
Bocaccio	1.7	5.5	7.2	29.6	-22.4	24.2%
Yelloweye	0.2	0.0	0.2	0.6	-0.4	41.4%
Cowcod	0.0	0.3	0.3	1.4	-1.1	21.7%

Table 18 Projected impacts of the proposed non-whiting trawl limits for 2012.

Species	Projected Total Catch (mt)			Harvest Guideline (mt)	Proj. - HG (mt)	Proj. % of HG
	North of 40°10'	South of 40°10'	Projected Total			
Sablefish	2,161	325	2,485	2,508	-23	99.1%
Longspine	1,091	250	1,341	1,919	-578	69.9%
Shortspine	1,246	141	1,387	1,434	-47	96.7%
Dover sole	15,905	1,805	17,710	22,240	-4,529	79.6%
Arrowtooth	5,509	15	5,524	9,472	-3,949	58.3%
Petrале sole	833	194	1,027	1,040	-13	98.8%
English sole	382	76	458	9,538	-9,080	4.8%
Other flatfish	684	186	870	4,213	-3,344	20.6%
Canary	9.3	1.5	10.8	21.8	-11.0	49.5%
POP	90.2	0.2	90.4	100.3	-10.0	90.1%
Darkblotched	151.5	19.3	170.7	238.4	-67.7	71.6%
Widow	6.0	8.8	14.9	235.5	-220.6	6.3%
Bocaccio	1.7	5.7	7.4	30.9	-23.5	24.0%
Yelloweye	0.2	0.0	0.3	0.6	-0.3	41.8%

Cowcod	0.0	0.3	0.3	1.4	-1.1	22.3%
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Proposed Trawl RCA Adjustments off Oregon

The GMT briefly reviewed three trawl RCA modifications proposed by Oregon Department of Fish and Wildlife. Two of these modifications deal with RCAs for fixed gear (100 and 125 fm) at the southwest corner of Heceta Bank (pages 65-68 in Agenda Item B.3.a, Attachment 1, June 2010). The third modification adjusts the 200-fm petrale RCA near Heceta Bank (Agenda Item B.3.b, Supplemental ODFW Report 2, June 2010). The team notes that these represent minor adjustments of coordinates that are already in place and were recommended by members of the commercial fishing industry.

The 100 and 125 fm lines at the southwest corner of Heceta Bank were moved seaward to better follow the bathymetry that they represent; the unmodified lines were, in many cases, extremely shallow. The industry has reported this to be an area of high yelloweye rockfish bycatch. While the impacts to yelloweye rockfish are not quantifiable, it is assumed that the modification will reduce yelloweye rockfish impacts.

The 200-fm petrale trawl RCA near Heceta Bank was moved shoreward following the recommendation of members of the fishing industry. This 200-fm line exceeded 400 fm in some areas. Hence, this modification provided more opportunity for trawlers targeting DTS. The impacts to petrale sole are not quantifiable, however, the GMT assumes that this modification did not increase petrale sole impacts appreciably because the modifications involved adding points associated with the 250-fm petrale sole RCA (i.e., these points were shoreward of the 200-fm petrale sole line). **The GMT recommends that the Council adopt all trawl RCA modifications proposed by ODFW under both a rationalized fishery structure or a trawl trip limit management structure.**

RECREATIONAL

California

Season and depth restriction diagrams (Figure 3) as well as corresponding impacts on overfished species (Table 19) under the tentatively adopted ACLs and ACTs are provided below.

The 2.6 mt HG under the 17 mt ACT will require the season to be reduced by a half month by closing the first two weeks in August. This management area is already constrained under the status quo season, with only a three month fishing season at 20 fms. The season opening date in the Northern and North-Central North of Point Arena would be the second Saturday in May, which is May 14th in 2011 and May 13th in 2012. This is expected to result in an increase in business the opening on a weekend benefiting local communities.

The canary rockfish harvest guideline of 22.9 mt under the tentatively adopted ACL will provide a buffer between the projected impacts and variability in the estimated catch of canary rockfish. Though the canary rockfish projected impacts of 9.4 mt is far below the 22.9 mt HG, the annual catches of canary rockfish in the recreational fishery are variable. Maintaining at least a 5 mt

buffer between the projected impacts and this residual buffer between projected and the HG should help prevent the need for inseason action to close the fishery before the proscribed date.

While modifying the depth restriction in the Cowcod Conservation Area (CCA) from 20 to 30 fm is not expected to result in an appreciable increase in the catch of cowcod, the 2008 Total Mortality Rate catch sharing would provide a significant buffer between the projected impact of 0.17 mt and the 1.4 mt Harvest Guideline under the tentatively adopted ACL. The 168.3 mt bocaccio OY would accommodate any potential increase in bocaccio impacts in the recreational fishery from allowing retention of shelf and slope rockfish and a 30 fm or 40 fm depth restriction in the CCA.

The reduced catches of minor nearshore rockfish south and blue rockfish in the 2008 and 2009 seasons resulted in reduced projected impacts and the increase in the minor rockfish south resulting from the new OFL determination methods, will allow a one and a half month increases in the fishing season in the South-Central Management Area and a two and a half month increase in the North-Central South of Point Arena Management Area. Under the revised ACL, these species will no longer be a constraint, allowing the season to be extended to December with a negligible increase in overfished species impacts. Though this will require a 0.1 mt reduction in the buffer between projected impacts of 2.5 mt and the harvest guideline of 2.6 mt for yelloweye rockfish, the increase in fishing opportunity compared with the no action alternative will provide much needed economic opportunity in the respective areas.

In total, the proposed season and depth restrictions represent an additional 6.5 months of fishing season statewide compared to the No Action Alternative, though the resulting seasons still only provides a 2.5 month season in the North-Central North of Point Arena Management Area.

The tentatively adopted ACLs will also accommodate the proposed changes to management measures other than the fishing season described in Agenda Item B.3.b, Supplemental CDFG Report 2.

Management Area	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Months
Northern	CLOSED				May 14/13* - Oct <20 fm							5.5	
North-Central North of Pt. Arena	CLOSED				May 14/13* - Jul <20 fm							2.5	
North-Central South of Pt. Arena	CLOSED				Jun-Dec < 30 fm							7	
South-Central Monterey	CLOSED				May - Dec < 40 fm							8	
South-Central Morro Bay	CLOSED				May - Dec < 40 fm							8	
Southern	CLOSED		Mar - Dec < 60 fm									10	

*The season opening date in the Northern and North-Central North of Point Arena would be the second Saturday in May, which is May 14th in 2011 and May 13th in 2012.

Figure 3. Rockfish, cabezon and greenling season structure under the tentatively adopted ACLs and ACTs.

Table 19. Projected impacts to overfished species in the California recreational fishery under the tentatively adopted ACLs and ACTs.

Species	Projected Impacts (mt)	2011 HG (mt)	2012 HG (mt)	2011 Percent HG	2012 Percent HG
Yelloweye Rockfish	2.5	2.6	2.6	98%	98%
Bocaccio	55.4	161.8	168.9	34%	33%
Cowcod Option 1	0.17	0.2	0.2	85%	85%
Cowcod Option 2	0.17	1.4	1.4	12%	12%
Canary Rockfish	9.3	22.9	24.2	41%	39%
Widow Rockfish	8.7	NA	NA	NA	NA

*Option 1 is derived from the status quo catch sharing, Option 2 reflects the alternative cowcod catch sharing option under consideration by the Council based on the 2008 Total Mortality Report .

Oregon

The preferred season structure (Table 12) for the 2011 and 2012 Oregon recreational fishery under the Council proposed ACLs and ACTs for overfished and non-overfished species, including the 17 mt yelloweye ACT, produces a season that is open offshore year round, except from April 1 to September 30 when fishing is only allowed shoreward of 40 fathoms (fm). Cabezon will be part of the marine bag limit year round, except from April 1 to September 30 when cabezon has a sub-bag limit of one fish. This should reduce cabezon impacts while still allowing for opportunities to retain cabezon year round. Estimated impacts for yelloweye rockfish and canary rockfish associated with this preferred alternative are 2.1 mt for yelloweye rockfish and 2.4 mt for canary rockfish.

Table 12. Preferred season structure and bag limits for the Oregon recreational fishery

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Projected Yelloweye Impacts (mt)	Projected Canary Impacts (mt)
Bottomfish Season	Open all depths			Open < 40 fm					Open all depths				2.1	2.4
Marine Bag Limit¹	Ten (10)			1 Fish Cabezon Sub-Bag ²					Ten (10)					
Lingcod Bag Limit	Three (3)													
Flatfish Bag Limit³	Twenty Five (25)													

¹ Marine bag limit includes all species other than lingcod, salmon, steelhead, Pacific halibut, flatfish, surfperch, sturgeon, striped bass, pelagic tuna and mackerel species, and bait fish such as herring, anchovy, sardine, and smelt

² From April 1 through September 30, the marine bag limit is Ten (10) fish per day, of which no more than one (1) may be cabezon.

³ Flounders, soles, sanddabs, turbot and halibuts except Pacific halibut

Washington

Washington recreational fisheries will be constrained primarily by yelloweye rockfish under the Council’s tentatively adopted ACLs and ACTs. Details of the management measures necessary to achieve the 17 mt ACT for yelloweye are the same as those shown Agenda Item B.3.a, Attachment 1, Section 4.1.1.3.

Recreational Harvest Guideline Sharing Between Washington and Oregon

The Council gave the GMT direction that WDFW and ODFW would move to state specific harvest guidelines (HGs) for yelloweye and canary rockfish. Historically, WDFW and ODFW managed the WA/OR Recreational yelloweye and canary rockfish HGs via an informal sharing agreement (Table 20 and Table 21). To capture our understanding of the Council’s guidance for

the record, the GMT understand that the proposed state-specific HGs are not anticipated to change the way either WDFW or ODFW manages its recreational fishery. Management measures are targeted to the same portion of the yelloweye and canary rockfish HGs that we have been analyzing (i.e., the overall projected impacts for yelloweye or canary rockfish remain the same). The ramp-down in yelloweye OY put the states in unknown territory because of the unknown effect of new management measures and variability in yelloweye catch rates. The shared HG between WDFW and ODFW was meant to provide flexibility to the two states during this adjustment period. In the event of unexpected yelloweye or canary rockfish harvest in one of the states, inseason action would be a possibility via coordination between WDFW and ODFW, rather than having to go through the Council meeting process, as long as the total WA/OR HG was not exceeded. Through that ramp-down period, the two states have demonstrated timely and proactive management to prevent exceeding their portions of the shared canary and yelloweye HGs.

Table 20. Historical Yelloweye Sharing of the WA and OR Harvest Guideline by State

Year	WA		OR		Total HG
	MT	%	MT	%	
2010	2.7	52.9%	2.4	47.1%	5.1
2009	2.7	52.9%	2.4	47.1%	5.1
2008	3.5	51.5%	3.3	48.5%	6.8
2007	3.5	51.5%	3.3	48.5%	6.8
2006	3.5	52.2%	3.2	47.8%	6.7
2005	3.5	46.7%	4.0	53.3%	7.5

Table 21. Historical Canary Sharing of the WA and OR Harvest Guideline by State

Year	WA		OR		Total HG
	MT	%	MT	%	
2010	4.9	23.4%	16.0	76.6%	20.9
2009	4.9	23.4%	16.0	76.6%	20.9
2008	1.7	20.5%	6.6	79.5%	8.3
2007	1.7	20.5%	6.6	79.5%	8.3
2006	1.7	20.0%	6.8	80.0%	8.5
2005	1.7	20.0%	6.8	80.0%	8.5

Trawl Rationalization and the 2011-2012 Harvest Specifications and Management Measures

Considerations for a Rationalized Shoreside Whiting Trawl Fishery

The GMT notes that shoreside whiting will receive a one-time overfished species allocation for the initial allocation. Thereafter, this sector will join the rationalized non-whiting trawl fishery and be allowed to trade/purchase shares of overfished and non-overfished species with others in

this rationalized fishery. As such, when reviewing the alternatives relative to the Pacific whiting shoreside sector (e.g., Table 4-19, page 24, Agenda Item B.3.a, Attachment 1, June 2010), consider that if overfished species initial allocations are constraining, they can be purchased from other shoreside quota pound holders.

IFQ Incidental Trip Limits (ITLs, pronounced like Skittles)

Under Amendment 20: Trawl Rationalization, the Council opted to manage the following species within the shoreside sector (whiting and non-whiting) with trip limits, instead of individual fishing quotas: minor nearshore rockfish north and south, black rockfish, cabezon (46°16' N. to 42° N. lat.⁸ and south of 42° N. lat.), California scorpionfish, spiny dogfish, longspine thornyhead south of 34°27' N. lat., shortbelly rockfish, other fish category (for the purposes of trip limits which includes longnose skate, big skate, California skate, California scorpionfish, leopard shark, soupfin shark, finescale codling, Pacific rattail (grenadier), ratfish, kelp greenling, shortbelly, cabezon in WA). The purpose of allowing trip limits for these species is to allow incidental catch to be landed and for the fishermen to be paid for those landings. Not having a trip limit would not prevent the fish from being caught. Rather, these species are caught incidentally regardless of whether there is a trip limit in place for them or not. When there is no trip limit, the fish must be discarded (“regulatory discard”) or forfeited to the state at the time of landing.

To explore trip limits that would strike this balance, the GMT examined monthly landings in the limited entry non-whiting and whiting trawl fishery from 2008 and 2009 and compared those to existing trip limits. Under Amendment 20, vessels with limited entry trawl permits have the ability to also use fixed gear (i.e., gear switching). **The trip limit recommendations provide for incidental landing allowances and are implemented when vessels are using trawl or fixed gears to harvest the IFQ species with a limited entry trawl permit. These incidental trip limits should be included as management measures under a rationalized fishery structure in the Council’s final preferred alternative.**

Minor nearshore rockfish and black rockfish north and south of 40°10' N. latitude

For minor nearshore rockfish and black rockfish, no limited entry trawl vessel achieved the existing cumulative limits specified in regulation (300 lbs/month). The highest monthly landings were between 150-200 pounds; the majority of the landings were less than 50 pounds. In a rationalized trawl fishery, the GMT does not anticipate increases to minor nearshore rockfish and black rockfish landings, given existing state regulations. Generally speaking, state regulations are as follows:

- WA: commercial fishing with either trawl or fixed gear (including pots) in nearshore waters (0-3 miles) is prohibited.
- OR: Vessels must hold a state fixed gear nearshore permit to land targeted amounts of nearshore rockfish. Incidental amounts of nearshore rockfish are allowed by trawlers and

⁸ The GMT notes that in 2010 the other fish category includes cabezon coastwide, while in 2011-2012 cabezon will be managed separately north of 42° N latitude but with the other fish category in the south. As such, the GMT provides for the first time a cabezon trip limit for the limited entry trawl shoreside sector.

by fixed gear vessels without nearshore permits, however 2010 state trip limits for these species are more restrictive than the 2010 federal trip limits.

- CA: Vessels must hold a state fixed gear nearshore permit to land any nearshore rockfish.

Further, the trawl sector will receive a relatively small yelloweye rockfish allocation and the yelloweye rockfish bycatch rates are the highest in the nearshore. As such, it appears the risk of targeting nearshore rockfish is too high and it is unlikely such events will occur. That is, with individual accountability and the anticipated high cost of yelloweye rockfish quota pounds it seems unlikely that targeting nearshore rockfish would occur. As such, **the GMT recommends that the minor nearshore rockfish and black rockfish incidental landing limits for vessels using trawl or fixed gears to harvest IFQ species with a limited entry trawl permit north and south of 40°10 be specified at 300 lbs/month for periods 1-6, which would accommodate the landings seen in the last two years.**

Cabazon (46°16 N. to 42° N. lat⁹ and south of 42° N. lat.)

The GMT reviewed recent landings of cabazon by the limited entry trawl fleet and notes that landings were infrequent and the majority was below 20 pounds. **The GMT would recommend that that the cabazon incidental landing limits for vessels using trawl or fixed gears to harvest IFQ species with a limited entry trawl permit be specified at 50 lbs/month for periods 1-6, which would accommodate the landings seen in the last two years.**

Spiny Dogfish

Trip limits for spiny dogfish were implemented on March 1, 2006 and have generally stayed at the same levels since that time. The limits currently specified in regulation are 200,000 lbs/2 months Jan-Apr; 150,000 lbs/2 months May-Jun; 100,000 lbs/2 months Jul-Dec. In recent years, no limited entry trawl vessels attained or came close to reaching the spiny dogfish cumulative limits specified in Federal regulation.

Under a rationalized fishery, an IQ holder could target spiny dogfish with either trawl gear or fixed gear. The GMT has no data to inform potential bycatch interactions while targeting spiny dogfish with trawl gear. With fixed gear, we would anticipate that yelloweye rockfish would constrain access to spiny dogfish. Feedback from industry indicates that the highest concentration of dogfish is near the 100 fm line, an area with a moderate bycatch rate of yelloweye. Similar to the discussion under minor nearshore rockfish, under a rationalized trawl fishery we would anticipate that the risk of yelloweye rockfish bycatch to an individual would likely outweigh the value of targeting spiny dogfish.

The GMT recommends that the spiny dogfish incidental landing limits for vessels using trawl or fixed gears to harvest IFQ species with a limited entry trawl permit north and

⁹ The GMT notes that in 2010 the other fish category includes cabazon coastwide, while in 2011-2012 cabazon will be managed separately north of 42° N latitude but with the other fish category in the south. As such, the GMT provides for the first time a cabazon trip limit for the limited entry trawl shoreside sector.

south of 40°10 be specified at 60,000 pounds/month, which would accommodate all monthly landings seen in recent years.

Longspine Thornyhead south of 34°27 N. latitude

Under Amendment 21, the Council chose not to make a trawl/non-trawl allocation for longspine thornyhead south of 34°27 N. latitude. Under Amendment 20, the Council chose to manage longspine thornyheads south of 34°27 N. latitude with trip limits, while longspine thornyhead in the north are managed with individual fishing quotas. The GMT believes this decision was a result of the limited catch history of longspine thornyhead by the trawl fishery south of 34° 27' N. latitude. From 1995-2005, the trawl fishery harvested <0.1 of the longspine thornyhead OY. Additionally, total mortality by all fleets in recent years has been well below the OY; in 2008 4% of the OY was harvested. It is our understanding that longspine thornyhead is not typically targeted; it is caught in association with shortspine thornyhead, a higher valued, more marketable species and/or Dover sole and sablefish. Under a rationalized trawl fishery, it is possible that a fishery will evolve south of 34°27 N. latitude either with trawl gear or fixed gear. Given the low exploitation of longspine thornyhead south of 34°27 N. latitude, the GMT believes that the existing trip limits could remain in place under a rationalized fishery. **The GMT recommends that south of 34°27 N. latitude, the longspine thornyhead incidental landing limits for vessels using trawl or fixed gears to harvest IFQ species with a limited entry trawl permit be specified at 24,000 lbs/2 months, which is the limit currently specified in regulation for limited entry trawl gears.**

Remaining fish

Currently, there are no limits imposed on the catch of species within the “other fish” complex for any of the commercial fisheries (limited entry trawl, limited entry fixed gear, or open access). Here we propose to call this category “remaining fish” since the “other fish” definition for harvest specifications includes different species than the intent of the remaining fish incidental trip limits. E.g., longnose skate was removed from the “other fish” harvest specifications category, yet for the purposes of the incidental IFQ trip limits longnose skate should be grouped with other skates. For the purposes of the incidental IFQ trip limits, other fish is to include: longnose skate, big skate, California skate, California scorpionfish, leopard shark, soupfin shark, finescale codling, Pacific rattail (grenadier), ratfish, kelp greenling, shortbelly, cabezon in WA. The GMT reviewed the 2008 and 2009 limited entry trawl landings of the species that comprise the newly proposed remaining fish incidental trip limit. Grenadier makes up the largest component of the remaining fish landings in the trawl fishery and most landings were less than 8,000 pounds with a few landings as high as 12,000 pounds. Historically, there was some buying/selling of grenadier in an attempt to develop a market, however it is our understanding that the recent year landings of grenadier represent incidental catch while targeting the DTS strategy. The remaining fish landings were less than 1,500 pounds with most monthly landings less than 1,000 pounds. Big skate and California skate also comprise the other fish category. In recent years, there has been interest in targeting and marketing skates. The GMT notes that in recent years catches have been below the Council’s preliminary preferred ACL decision for other fish.

As such, the GMT recommends that the remaining fish incidental landing limit for vessels using trawl or fixed gears to harvest IFQ species with a limited entry trawl permit remain unlimited. Should increased landings occur, the Council could implement the trip limits analyzed during this SPEX process and implement them through routine inseason action. Given the number of species comprising the remaining fish limit, the GMT also recommends that trip limits be further analyzed in the EIS that would provide for sublimits (e.g., higher limit for grenadier, lower limit for skates).

RCA Configurations for Vessels Harvesting QP with Trawl gear or Fixed Gear

RCAs are by far the most extensive and complex closed areas used in groundfish management. First implemented in late 2002 as part of an in-season management action, RCAs extend from the Canadian border to the Mexican border of U.S. west-coast waters. The RCAs were implemented to reduce bycatch of overfished species, which may concentrate within specific depth ranges. Based on analysis of West Coast Groundfish Observer Data and vessel-logbook data, the boundaries of the RCAs were set to prohibit groundfish fishing within a range of depths where encounters with overfished species were most likely to occur. In order to make enforcement possible, in most cases the actual isobaths—lines of equal depth—are approximated by straight lines between published waypoints. The depths included in RCAs vary by season, latitude, and regulatory sector. Boundaries for limited entry trawl vessels are different than those for the limited entry fixed-gear and open access sectors.

Trawl RCA boundaries and cumulative limits are routinely adjusted inseason based upon fishery performance. Managers structure catch limit opportunities and closed areas with several objectives in mind including protecting rebuilding species while simultaneously providing for a year round fishing opportunity. While many adjustments to catch limits and trawl RCA boundaries are relatively minor, in recent years some of these adjustments have been relatively extreme and have closed fishing opportunity for wide areas of the coast mid-season. For example, in 2004 an unexpected amount of darkblotched rockfish catch occurred in the fishery leading to a large expansion of the trawl RCA and elimination of several target species opportunities, including petrale sole—one of the most important target species to bottom trawlers. In January and February of 2006, unseasonably favorable weather occurred making it easy for vessels to target petrale sole during their aggregation period. This led to a catch of petrale sole during the first 2-month cumulative trip limit period that was nearly twice the expected amount. This caused managers to eliminate petrale sole opportunities at the end of the year in an attempt at preventing overfishing of the stock in that year. In 2008, the area north of Cape Alava (48.10° N. latitude) was closed (RCA extended to the shore) in order to reduce canary rockfish impacts. In later years, this closure remained in place in order to reduce trawl impacts to yelloweye rockfish.

Nonwhiting groundfish vessels fish in depths as shallow as 10 fathoms and as deep as 600 fathoms; in recent years the largest volume of retained catch has come from deeper than 250 fathoms. In recent years, the trawl RCA north of 40°10' N latitude has varied from a boundary line approximating the 75 fm depth contour (75 fm line) to the 100 fm line shoreward and 150 to

200 fm seaward. Most often, the shoreward boundary has been specified at 75 fm in an effort to reduce canary rockfish catch. The seaward line has varied from 150 fm, 200 fm, and 250 fm. South of 40°10 N. latitude, the RCA has remained at 100 fm to 150 fm to reduce bocaccio, canary, and cowcod encounters.

Under current management of the trawl fishery (i.e., No Action), catch projections (and estimates of total catch inseason) are made using what is often described as the “trawl bycatch model.” This model uses discard estimates from the WCGOP data and logbook information to develop temporal and spatially stratified bycatch rates for overfished species. The bycatch model can be used to estimate both target species and overfished species catch based on a proposed set of management measures (2-month cumulative trip limits and RCA configurations).

Under a rationalized fishery, individuals will be held accountable for their bycatch; however there is still a risk of exceeding the trawl allocation since overfished species interactions can be unpredictable. As such, the Council may wish to maintain a core RCA structure which would continue to close the area where encounters with overfished species are considered most likely. It is our understanding that the type of gear employed determines the RCA structure. As such vessels who harvest IFQ species with trawl gear will be held to the trawl RCA while vessels with fixed gear will be held to the fixed gear RCA.

The decision on where to set the shoreward and seaward boundaries of the trawl RCA is largely a risk call based on available data that, under a rationalized fishery, is not something that can be evaluated within the trawl model. That is, the bycatch rates that are used in the trawl model (Agenda Item B.3.a Attachment 2, Table 4-18) inform the potential risk of allowing fishing opportunity in certain depths, however the trawl model calculus (e.g., trip limits, assumptions of effort distribution, RCA, etc.) will no longer be applicable under trawl rationalization. As such, the GMT does not have a recommendation for an RCA structure under a rationalized fishery, as we have had in the past, but rather an exploration of the risk that is inherent in the Council’s decision. **The boundaries of the non-trawl RCA will largely be determined by the fixed gear models (nearshore and non-nearshore).**

Reviewing the current trawl bycatch data by depth and season is still useful to inform a core trawl RCA structure for a rationalized trawl fishery (Figures 4-13). It is important to note that there is no way to know if the historical bycatch rates will be representative of a rationalized fishery, since rationalization has not yet occurred. However, these rates provide a starting point for considering RCA structures.

In addition to maintaining the core RCA structure, the Council has expressed the desire to use RCA adjustments inseason in order to prevent exceeding the trawl allocation for overfished species. For example, should the trawl sector attain its allocation of yelloweye rockfish, the available bycatch rate data suggests that moving the shoreward boundary to shore (i.e., close trawling shoreward of the RCA) would largely reduce further yelloweye rockfish impacts, while still allowing other species to be harvested on the seaward side of the RCA (Figure 4, Figure 5). Should the canary rockfish allocation be attained, the seaward boundary could be set at 150 fm which would prevent reduce canary rockfish impacts substantially relative to shallower depths while still allowing other species to be harvested. Similarly, should the petrale sole allocation be

attained midyear, the seaward RCA could be set at 250 fm in order to provide access to deep water stocks while preventing petrale sole impacts (Figure 8). These are only a few examples of the variety of inseason adjustments that can be made to the RCA to keep the trawl sector within their allocation, as seen in the figures.

Shoreward RCA Considerations

Shoreward of the RCA and north of 40°10' N. latitude, yelloweye and canary rockfish interactions constrain access to target species. For yelloweye rockfish, the high bycatch rates occur in waters less than 100 fm (Figure 4). It appears that trawl catch of yelloweye rockfish shoreward of a 50 fm RCA would result in lowest impacts north and south, especially during the 1st, 2nd, and 6th periods. This would also limit access to target species, however, and may cause conflicts with open access and limited entry fixed gear fishermen. Yelloweye rockfish have a patchy distribution and as such using fleetwide bycatch rates over a large area (north and south of 40°10' N. latitude) as currently implemented may be overly constraining, especially under the auspices of individual accountability. That is, in a rationalized fishery, the individual has the incentive to avoid the patchy areas of known yelloweye rockfish concentrations to minimize that individual's bycatch rate and thereby maximizing their harvest of target species. We still anticipate that individuals will encounter yelloweye rockfish unexpectedly, and thus, the Council may consider setting the shoreward RCA at either 75 or 100 fm and evaluate / refine the RCA structure as each year progresses, if data exists. Note that north of Cape Alava, yelloweye bycatch rates are lowest inside of the 60 fm line; bycatch rates would increase substantially if shoreward RCAs were moved from the 60 fm line to the 75 fm line (Figure 5).

For canary rockfish north of 40° 10' N. latitude, bycatch rates increase when the shoreward RCA is specified at 100 fm relative to the 75 fm line and shallower depths (Figure 6), especially during the summer and fall months (Periods 3, 4, and 5) in the north. As such, if the Council desires to implement a 100 fm RCA boundary for the rationalized trawl fishery in the north to provide more fishing opportunities while reducing the risk of encounters with canary rockfish, it might consider doing so during Periods 1, 2, and 6 when canary-bycatch rates are lowest (Figure 6). It is important to realize, however that most spring/summer/fall bycatch rates are collapsed across periods 3–5 because of sample-size limitations, hence, the GMT does not have bycatch rate information for the individual periods in the spring/summer/fall. This problem makes it impossible to differentiate differences in bycatch rates among periods. We note that industry feedback indicates potential target species (e.g., sanddabs) could be accessed between 75 and 100 fm with low bycatch interactions (e.g., sanddabs). Note that north of Cape Alava, RCAs would need to be set at the 75 fm line to minimize canary rockfish interactions as bycatch rates increase dramatically deeper than 75 fm (Figure 7).

Canary, cowcod, and bocaccio constrain access to target species shoreward of the RCA south of 40°10' N. latitude. For canary rockfish, the bycatch rates are lower when the shoreside RCA is set at 60 fm, compared to 75 fm (Figure 6). Similar to the northern bycatch rates, there is seasonal variation in bycatch rates. However, as opposed to the north, highest canary bycatch rates were observed in the south during the winter periods (1, 2, and 6). Cowcod bycatch rates are highest shoreward of 75 fm and 100 fm lines relative to shallower RCAs (i.e., < 60 fm; Figure 9). For bocaccio rockfish, bycatch rates are typically high only near the 100 fm line during winter

months; rates are relatively low for this species at all other depths and during periods 3, 4, and 5 (Figure 10).

The southern shoreward RCA has been set at 100 fm in the past, and this action appears to have been successful in keeping bycatch of canary, cowcod, and bocaccio within acceptable limits. Hence, south of 40° 10' N, maintaining the 100 fm RCA may provide access to target species while minimizing impacts to overfished species.

RCA structures for widow rockfish are clear north of 40°10 N. latitude; seaward RCAs less than 60 fm are most protective for all seasons (Figure 11). Note that widow rockfish encounters are extremely low for all depths during periods 3, 4, and 5 relative to periods 1, 2, and 6. South of 40° 10' N latitude widow rockfish bycatch remains fairly constant when the RCA is set at 150, 180 or 200 fm. These depths also represent the highest widow rockfish bycatch rates.

Seaward RCA Considerations

Darkblotched rockfish and POP constrain access to target stocks along the northern coast of the western U.S. For darkblotched rockfish, there is a significant change in the bycatch rate at 38° N. latitude and as such, rates are stratified at 38° rather than 40°10 N. latitude. A seasonal trend in darkblotched bycatch rates is apparent when the RCA is set at either 150 fm or 180 fm; rates are highest during winter months (periods 1 and 6). Darkblotched rockfish bycatch can be significantly reduced by moving the RCA deeper than the 200 fm line, while maintaining access to the DTS complex (Figure 12).

For POP, bycatch rates are highest when the RCA is specified at the 150 fm or 180 fm line relative to deeper RCA options (Figure 13). The rates are the highest when the line is specified at 150 fm in periods 3 and 4.

Petrale Sole

Petrale sole exhibits distinct seasonal depth migrations. Hence, RCA structures for this species should be seasonal. Depth profiles of petrale sole catches () suggest that during periods 1 and 6, there is virtually no petrale catch at depths less than 125 fm, most interactions occur between 175-200 fm, and catches then drop off quickly outside of the 200 fm line. Depth distributions change during periods 2 and 5, when petrale sole are typically deeper than 125 fm, an intermediate depth for this species. Finally, petrale sole are shallowest during periods 3 and 4, when highest bycatch rates are observed shallower than 125 fm.

Gear Switching and RCAs

Amendment 20 allows quota pounds associated with a limited entry trawl permit to be harvested with either trawl gear or legal fixed gear (known as gear switching). Regulations currently specify both a trawl and non-trawl RCA. It is our understanding that the type of gear employed determines the RCA structure. As such vessels who harvest IFQ species with trawl gear will be held to the trawl RCA while vessels with fixed gear will be held to the fixed gear RCA.

The GMT notes that the preliminary preferred trawl allocation for yelloweye rockfish is very low (0.6 mt). This allocation was informed by the trawl model and is low primarily because current management measures (e.g., trawl gear restrictions and RCAs) prohibit fishing in rocky habitats where yelloweye rockfish concentrate. Yelloweye rockfish bycatch rates in the nearshore fixed gear fisheries are much greater than the trawl fishery bycatch rates, largely because fixed-gear fishermen are able to fish over bottom with structure (e.g., rocky bottom). In certain geographic areas and depth ranges, canary rockfish bycatch rates are also higher in the nearshore model than in the trawl model. This information suggests that under trawl rationalization, special consideration may be given to those who switch gears to ensure that the yelloweye trawl allocations are not exceeded.

The GMT believes that the Amendment 20 gear switching provision shoreward of the RCA may present an increased risk of exceeding the trawl sector allocation for yelloweye rockfish, and possibly canary rockfish. The GMT does not have bycatch rate data to inform the fixed gear bycatch rates between 30 fm and 75-100 fm (the available trawl RCA north of 40' 10). However, given that the trawl bycatch rates and survey data show that yelloweye are prevalent in this depth range, we feel it is safe to assume that concerns discussed above using bycatch rates inside of 30 fm will likely be relevant to 100 fm.

Further, the GMT notes that the shoreward non-trawl RCA is likely to be set as follows, under the Council's preliminary preferred decision:

- Closed in WA
- 30 fm in northern Oregon and 20 fm in the remaining areas in Oregon (largely state waters)
- 20 fm in northern; 30 fm in central California (largely state waters)
- 60 fm south of 34°27 N. latitude.

The trawl sector received no allocation of nearshore species and as such will be unlikely to operate shallower than 30 fm. Further, state regulations require nearshore permits to land targeted amounts of nearshore species. In Oregon, additional gear restrictions may restrict fixed gear operations in this area. For example, pot fishing in Oregon within the 3-mile limit is currently restricted to one state nearshore permit and can be only be changed through a State-legislative vote. In reviewing the proposed non-trawl shoreward RCA structure, it appears that the most viable opportunity for shoreward activity is south of 34°27 N. latitude.

The GMT notes that for the seaward side of the RCA, the gear switching provision will be much less risky for encountering overfished species and may be most beneficial for those operating under trawl rationalization. Allowing gear switching seaward of 100 fm, the non-trawl RCA structure under the preliminary preferred decision, may allow access to valuable species such as sablefish and shortspine thornyheads.

Potential for a Mid-water Opportunity in 2011-2012

There is an opportunity under the trawl rationalized program to allow targeting of species such as yellowtail rockfish within the RCA using midwater trawl gear during the primary whiting season. Under current trawl rationalization regulations, this opportunity may be permissible regardless of amount of whiting onboard. A cursory analysis of data reveals that the risk of a mid-water opportunity appears lower than for bottom trawl gear for some species (e.g., yelloweye); it may be equally as risky for species as canary; and appears to have a higher risk for species like widow rockfish. **The GMT believes that the under a rationalized trawl fishery structure, individual accountability, and the preliminary preferred ACLS for canary and widow rockfish and subsequent trawl allocation, this opportunity could be afforded in 2011-2012.**

Amendment 20: Carry-over Provision

Under the Council's final preferred alternative for Amendment 20, unused QP up to 10 percent of the used and unused QP in the vessel account may be carried over for use in the next year. Similarly, in order to cover an overage (landings that exceed the amount of QP held in a vessel account) QP that may be allocated in the next year may be transferred to the current year, up to 10 percent of the used and unused QP in the vessel account during the current year. In sum, Amendment 20 provides for 10 percent of the quota pounds to be carried over (excess quota pounds) or carried under (deficit quota pounds).

The rationale for the carryover is described in the Amendment 20 FEIS and is based around increased flexibility to fishery participants. Through the SPEX process we must consider how the carry-over provision works in relationship to the 2011-12 ACLs and the trawl allocation. It is essentially a question of management uncertainty, i.e. the risk the provision poses to our ability to stay within catch limits and whether that risk is acceptably low.

To explore this risk, we looked to the worst case scenario. The largest potential overage from the carry-over alone is of course, 10 percent. Every QP holder would need to carry under their 10 percent for that situation to occur and all QP would need to be harvested. Such a scenario is of concern only for species that are "fully prescribed" in the TIQ fishery and seems like a low risk to us. Moreover, given the carry under is matched with a carry over for the next year, we would not expect the biological impact to be high.

Table 2-45 (Agenda Item B.3.a Attachment 2) outlines the non-overfished species for which the OY was attained by 80 percent or greater from 2005-2008. Of those species, Dover sole, sablefish, and short spine thornyhead are targets in the trawl fishery. The GMT anticipates that sablefish will be harvested at greater than 80 percent, especially given the lower ACL contemplated in 2011-2012 relative to recent OYs. Petrale sole is likely to be fully prescribed because of its market desirability and restrictive rebuilding ACL. Whiting is another candidate.

As for Dover sole, the preliminary preferred ACL for Dover sole is significantly greater (25,000 mt) than the OYs seen in 2005 and 2006 (7,476 mt and 7,564 mt, respectively). Even if markets expanded it seems unlikely that the trawl allocation would be exceeded or that all or a majority

of permit holders would carry forward a deficit. As such, it is not likely that there is a risk of exceeding the Dover sole trawl allocation, let alone the ACL, given the carry over provision.

The GMT anticipates that in addition to sablefish and shortspine thornyheads, all overfished species will be greater than 80 percent prescribed and thus are potential species for which a carryover may be possible.

We also considered what would happen if a stock assessment was completed in 2011, an accompanying point of concern was issued, and the ACL was reduced mid-cycle. For example, consider petrale sole actions during 2009/2010, where the stock assessment indicated cause for concern and the OY was reduced mid-year during 2009 and further reduced during 2010 (Table 22)

Table 22. Example of petrale sole changes in OY through point of concern

Year	OY (mt)	Trawl Allocation* (mt)	New OY (mt)	Trawl Allocation* (mt)	% change in Allocation
2009	2,433	2,393	2,433	1995	17%
2010	2,393	2,393	1,193	1178	51%

*For analytical purposes we assumed the projected impacts were the defacto trawl allocation.

In the case of a mid-year point of concern declaration, the Council could reduce the amount of potential carry over proportionately to the reduction in the ACL. A similar proportional reduction could apply if the 2013-2014 (next SPEX process) are reduced compared to the 2012 ACL (current SPEX process).

Impact of Petrale Sole Harvest Reductions to Halibut IBQ

The 2011 petrale ACL reductions and arrowtooth ACL decision are tied directly to the initial allocation of individual bycatch quota (IBQ) for Pacific halibut. Halibut IBQ will be calculated using a formula based on quota share (QS) for arrowtooth flounder and petrale sole, two target species that correlate to Pacific halibut bycatch. Therefore, under the new lower petrale ACLs, those permits with relatively less arrowtooth QS will be allocated relatively less halibut IBQ. Conversely, the higher petrale ACL alternatives are more likely to result in the intended distribution of halibut IBQ under the Amendment 20 action.

Figure 4. Bycatch rates (OFS catch / landed species catch) of yelloweye rockfish north and south of 40° 10' by calendar period and depth category; north of Cape Alava closed.

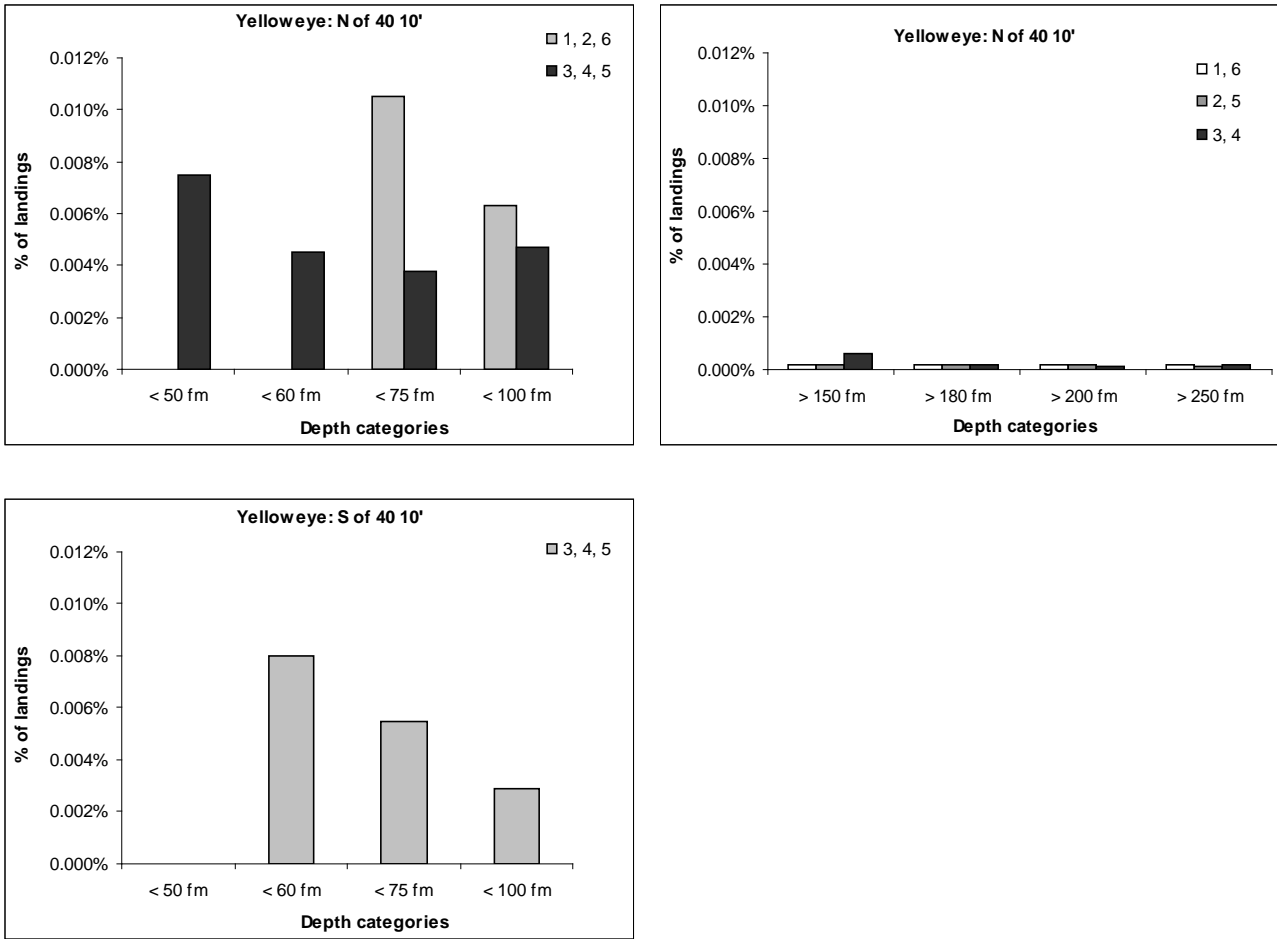


Figure 5. Bycatch rates (OFS catch / landed species catch) of yelloweye rockfish north of 40° 10' by calendar period and depth category; north of Cape Alava open.

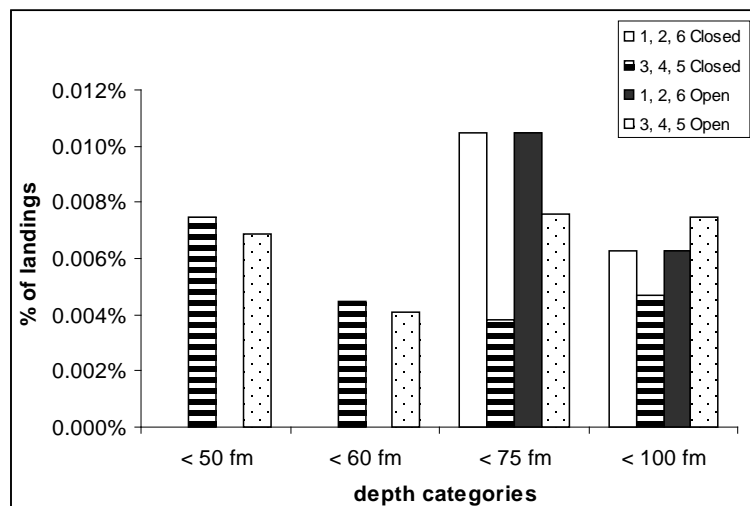


Figure 6. Bycatch rates (OFS catch / landed species catch) of canary rockfish north and south of 40° 10' by calendar period and depth category, with area north of Cape Alava closed.

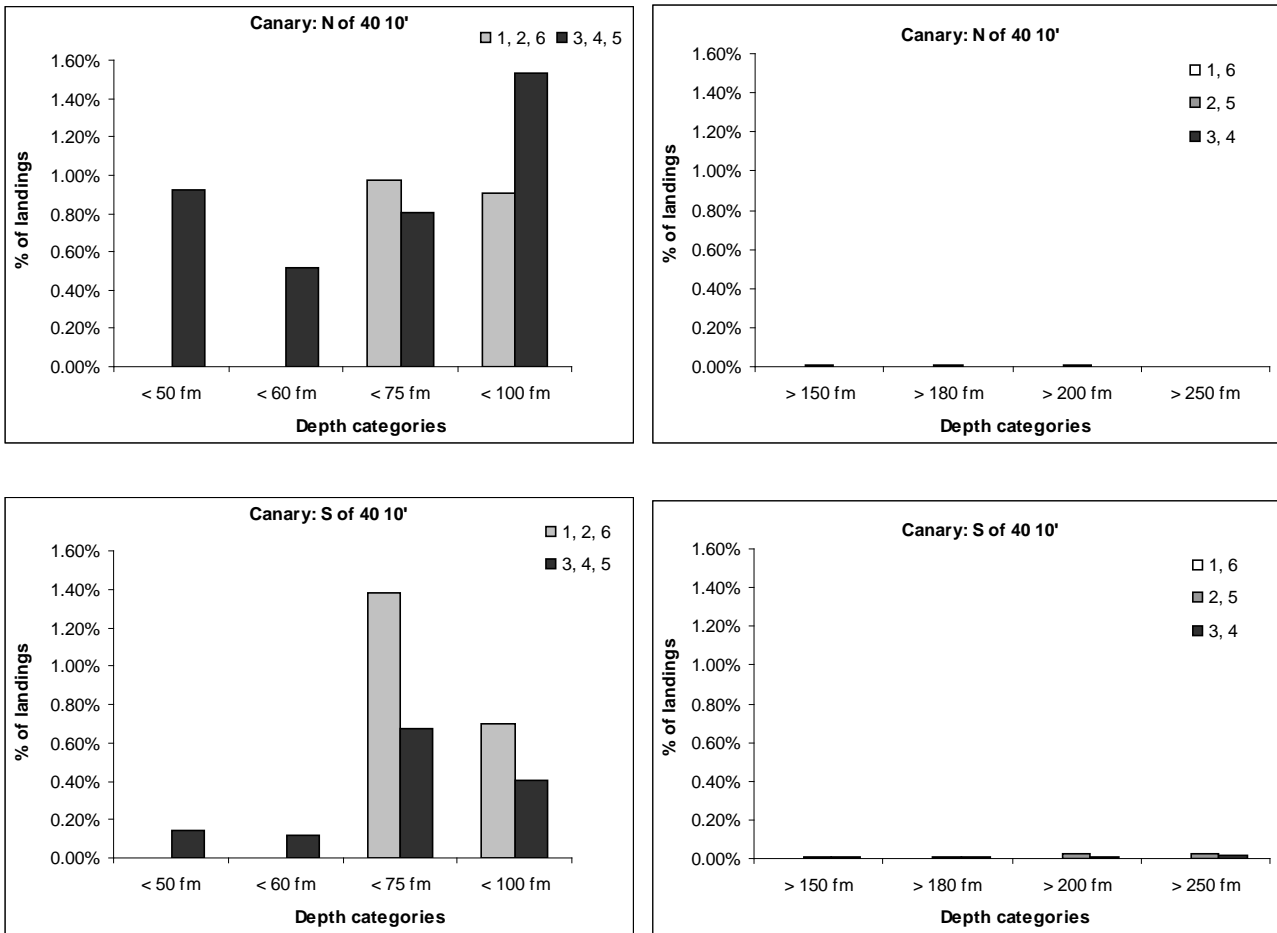


Figure 7. Bycatch rates (OFS catch / landed species catch) of canary rockfish north of 40° 10' by calendar period and depth category, with area north of Cape Alava open.

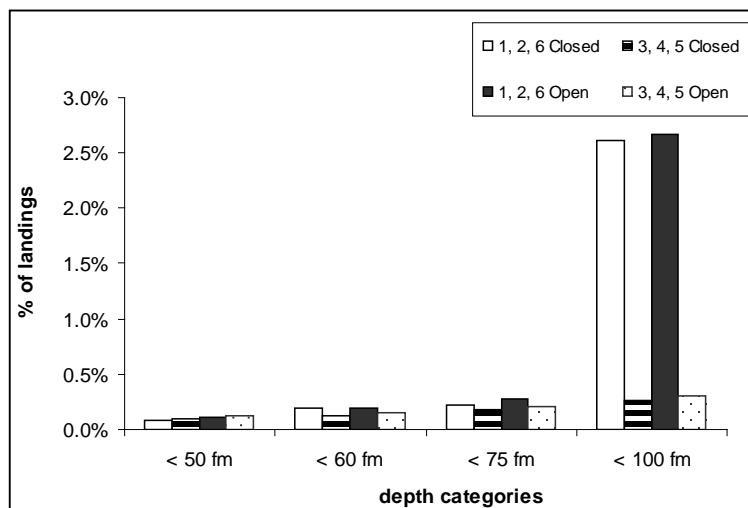


Figure 8. Bycatch rates (OFS catch / landed species catch) of petrale sole by calendar period and depth category.

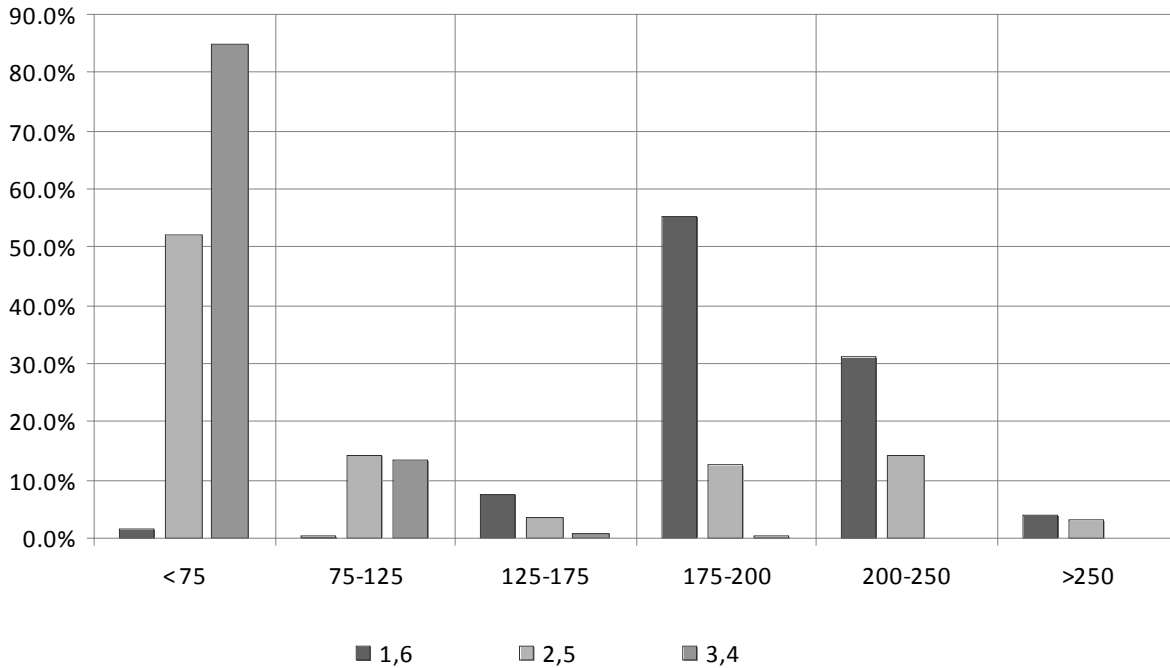


Figure 9. Bycatch rates (OFS catch / landed species catch) of cowcod south of 40° 10' by calendar period and depth category.

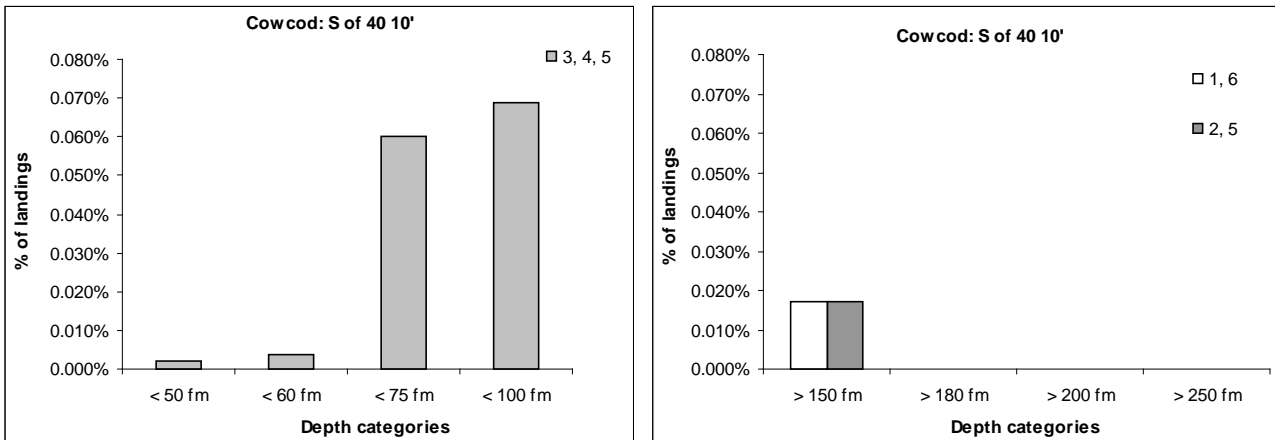


Figure 10. Bycatch rates (OFS catch / landed species catch) of bocaccio rockfish south of 40° 10' by calendar period and depth category.

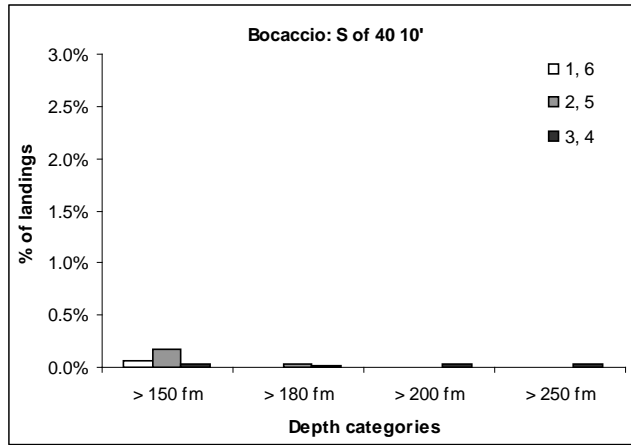
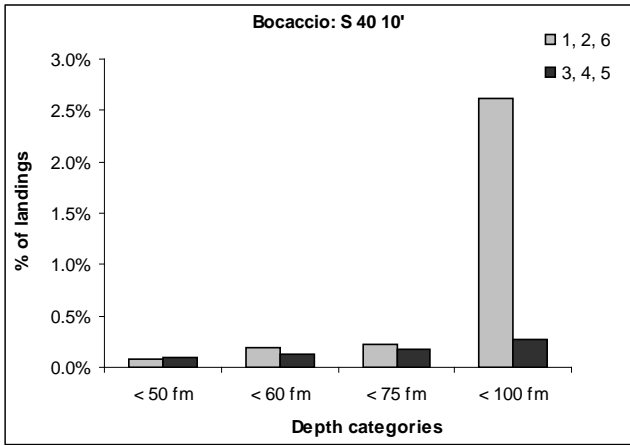


Figure 11 Bycatch rates (OFS catch / landed species catch) of widow rockfish north and south of 40° 10' by calendar period and depth category.

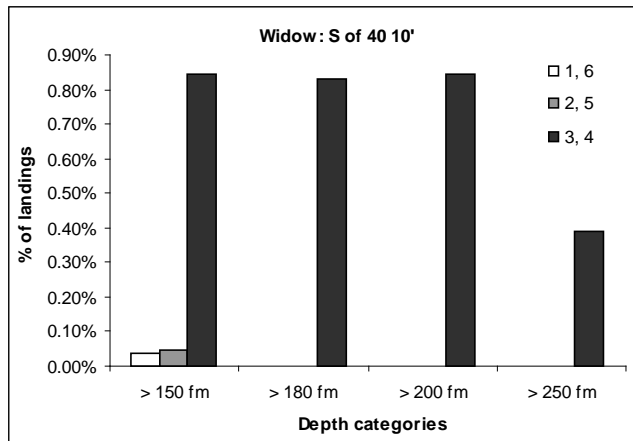
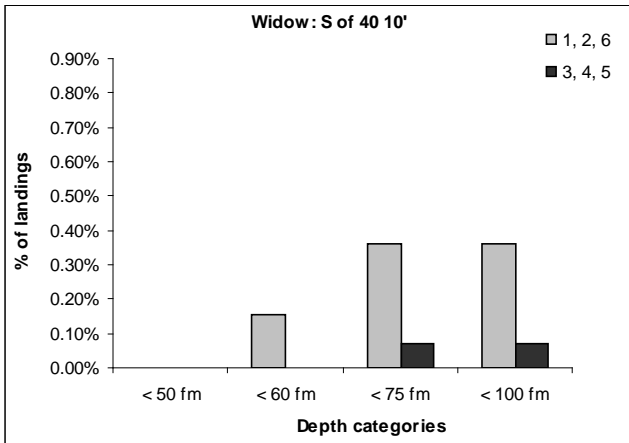
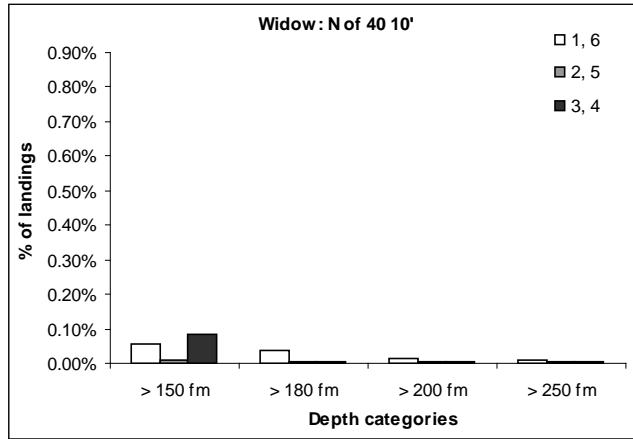
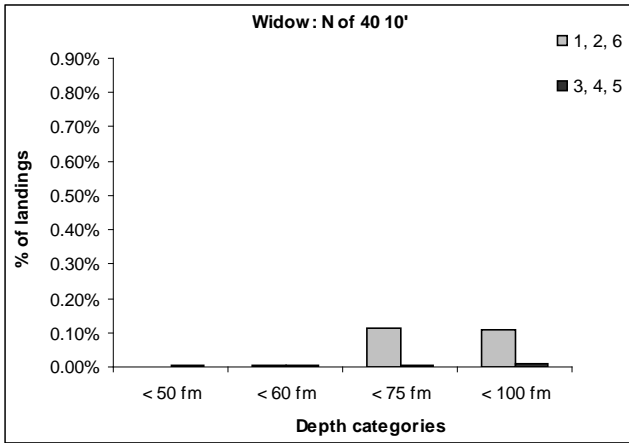


Figure 12 Bycatch rates (OFS catch / landed species catch) of darkblotched rockfish north and south of 40° 10' by calendar period and depth category.

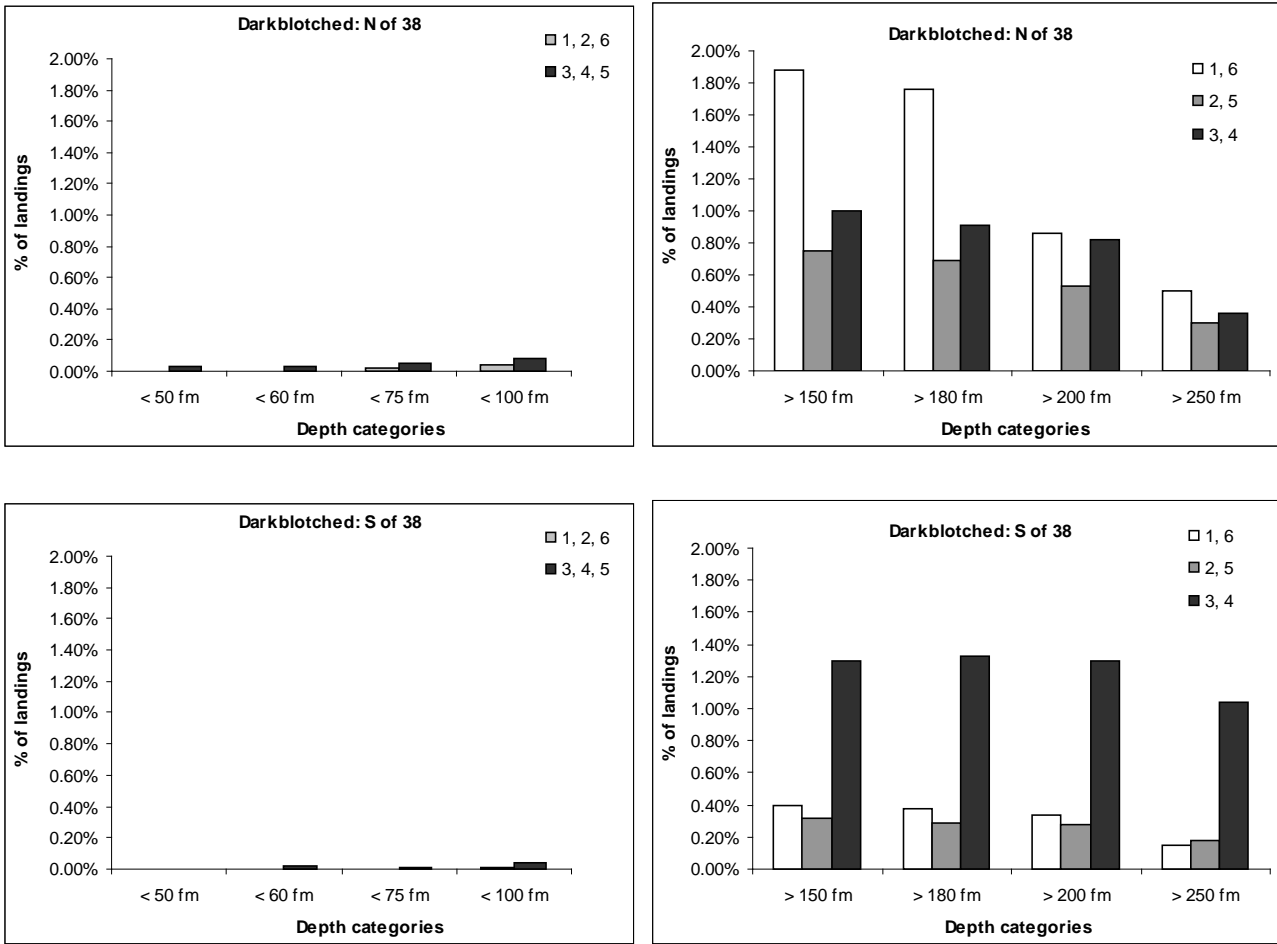
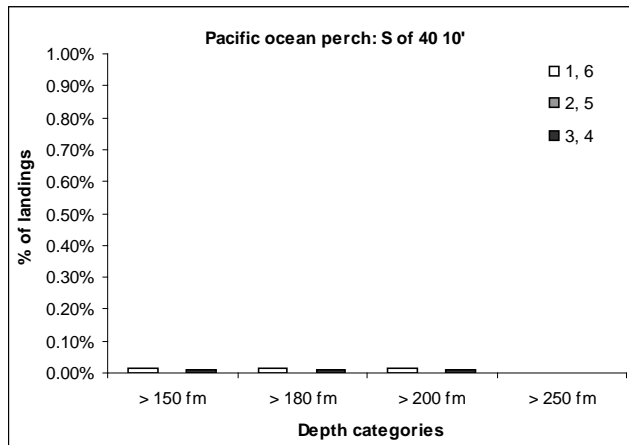
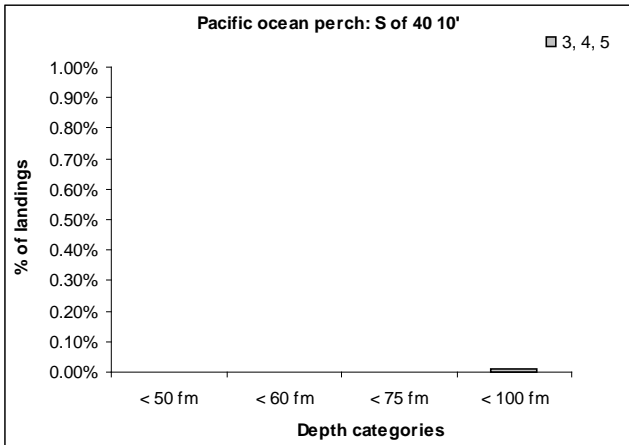
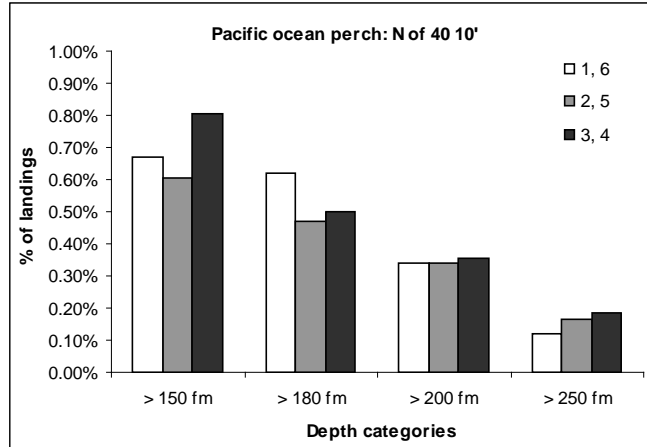
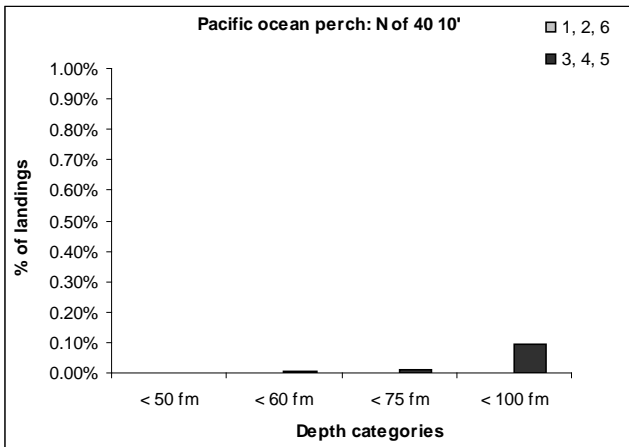


Figure 13 Bycatch rates (OFS catch / landed species catch) of Pacific ocean perch north and south of 40° 10' by calendar period and depth category.



GMT Recommendations:

1. Adopt Amendment 21 allocations as shown in Tables 1 and 2*.
2. Adopt two year allocations necessary for TIQ initial allocation as shown in Table 3*.
3. Adopt sablefish allocations in Table 4*.
4. Consider the 157 mt catch of POP if the intent was to set the ACT at the highest catch seen in recent years (i.e. allow greater flexibility in whiting fishery).
5. Consider whether the 2005 stock assessment error changes its rationale for tentatively adopting a cowcod ACL of 3 mt.
6. Consider recent catches in non-trawl sector relative to the Amendment 21 allocations for petrale sole.
7. Specify a blue rockfish HG for California of 241 mt in 2011 and 239 mt in 2012.
8. Consider projected impacts of yelloweye by sector relative to the Council's tentatively adopted ACT and biennial allocation decision.
9. Specify bi-monthly cumulative limits for the LEFG-DTL sablefish beginning January 1, 2011 of 6,500 lbs for Period 1, 7,500 lbs for Periods 2-5, and 6,000 lbs for Period 6.
10. Specify the trip limit structure between OA and LE south of 36 degrees N latitude.
11. Provide guidance of yelloweye and canary sharing between Oregon and California in the directed nearshore fishery.
12. Adopt trip limits and RCA structures for the limited entry non-whiting trawl fishery in the event that trawl rationalization is not in place January 1, 2011.
13. Adopt recreational management measures for Washington, Oregon, and California including HGs.
14. Adopt IFQ incidental trip limits as follows:
 - a. minor nearshore rockfish and black rockfish incidental landing limits for vessels using trawl or fixed gears to harvest IFQ species with a limited entry trawl permit north and south of 40°10 be specified at 300 lbs/month for periods 1-6
 - b. cabezon incidental landing limits for vessels using trawl or fixed gears to harvest IFQ species with a limited entry trawl permit be specified at 50 lbs/month for periods 1-6
 - c. spiny dogfish incidental landing limits for vessels using trawl or fixed gears to harvest IFQ species with a limited entry trawl permit north and south of 40°10 be specified at 60,000 pounds/month
 - d. longspine thornyhead incidental landing limits south of 34°27 N. latitude for vessels using trawl or fixed gears to harvest IFQ species with a limited entry trawl permit be specified at 24,000 lbs/2 months
 - e. remaining fish incidental landing limit for vessels using trawl or fixed gears to harvest IFQ species with a limited entry trawl permit remain unlimited
15. Set trawl RCAs for a rationalized fishery based on risk tolerance.
16. Set non-trawl RCAs consistent based on the non-nearshore model results and yelloweye constraints.
17. Adopt all trawl RCA modifications proposed by ODFW. Such modifications would be in place under a rationalized or status quo fishery structure.

*Allow the GMT, NMFS, and/or Council staff to make technical corrections as needed to meet the Council's intent under Amendment 21 and 2011-2012 allocations.