

**GROUND FISH MANAGEMENT TEAM REPORT ON PART II MANAGEMENT
 MEASURES FOR 2011-2012 FISHERIES**

The GMT had to discuss Part II of Management Measures for 2011-2012 Fisheries, prior to the completion of agenda items for Harvest Specifications and Part I of Management Measures by the Council. Therefore, our comments are somewhat generalized and based on status quo (2010) overfished species OYs (Annual Catch Limits (ACLs)) and Council guidance from November 2009 to use the March 2009 scorecard (Agenda Item G.7.b. Supplemental GMT Report, March 2009) as the preliminary preferred option for the sector-specific catch sharing of the ACL alternatives. Other catch sharing options are shown in the series of tables appended to the end of this report.

Petrale Rebuilding

Under this agenda item the Council is scheduled to adopt a range of ACLs designed to rebuild petrale as required under the Magnuson-Stevens Act. The GMT presented the trade offs of the various Alternatives under consideration under Agenda Item I.4. In addition to the range of ACLs and any preliminary preferred ACL for petrale, the Council will need to specify set aside amounts that will be taken off the top (i.e. based on expected tribal, research, exempted fishing permits, etc.), guidance on allocations between the trawl and non-trawl sectors, and guidance on whether to assume a year round or winter-only fishery.

The Makah Tribe has indicated that their expected catch of petrale in 2011-2012 is 45.4 mt based on effort projections and recent catch. The GMT also examined recent research catches of petrale sole. Those are provided in Table 1 below. Estimates of all impacts that would contribute to a set-aside are in Table 2. Estimates of EFP catch are based on the Council action in November 2009. In other words, the numbers reflect the two EFPs (TNC and whiting) that are expected to have petrale impacts continuing for 2011-2012. The GMT notes that the TNC EFP is expected to take 6 mt, unless a proportional reduction is applied, in which case the impacts would be 2 mt. The whiting EFP is estimated to take trace amounts (0.02 mt in 2009). Petrale impacts from incidental fisheries including California gillnet, cucumber trawl, and California halibut is about 43.2 mt. This number includes the maximum estimated impact from the California halibut fishery from 2004-2006 of 43 mt.

Table 1. Research Catches (mt) for Petrale Sole from 2001-2008, including maximum, minimum and average catches.

2008	2007	2006	2005	Max	Min	Avg
2.00	17.00	2.30	1.73	17.0	1.73	5.8

Table 2. Estimates for petrale sole set asides need for 2010 in various fisheries (mt)

	2010 Estimate (mt)
Incidental landings	43.2
EFP ^{/1}	6.0
Tribal	45.4
Research (average 2005-2008)	17.0
Total Impacts	111.6

/1 EFP Estimate includes estimate for 2010 for TNC and shoreside whiting average from 2007-2009

Discussion of Trawl Effects under Strategic Rebuilding Alternatives

The expected effects of the rebuilding alternatives on the trawl fishery are relatively more difficult to predict for 2011 and 2012 fisheries than in the past due to the movement of the fishery from the status quo regime to a rationalization regime. One of the primary effects expected of this shift in management will be changes to individual fishing behavior, and with those changes will come variations in the way individual vessels choose to prosecute fishery opportunities. Nevertheless, reasonable expectations about fishing opportunity – and their effects – can still be drawn from the strategic rebuilding alternatives.

Alternative 2

Alternative 2 is generally described as an alternative that results in relatively small opportunities on both the slope and shelf areas. In this alternative, midwater opportunities are also restricted.

On the shelf, trawl opportunities are highly restricted by canary rockfish, yelloweye rockfish, cowcod, and bocaccio. While past canary rockfish OYs have been set at similar levels, more recent observer data indicates that keeping the fishery to a level that is less than 50 mt would require substantial restrictions on opportunities shoreward of the RCA in the north under the existing management framework. Under the existing regime, this would translate into restrictive RCA boundaries (perhaps 60 fm restrictions with some areas off Washington and Oregon closed to the shore) and a reduction in trip limits. Under an IFQ regime, this equates to individual harvesters facing difficulty in prosecuting shelf activity, and in the process, underutilizing many shelf target species. Smaller vessels that are not able to fish in deeper waters may lease their quota to larger vessels and tie up. A similar outcome can be expected in the south due to the size of the cowcod and bocaccio ACLs.

On the slope, darkblotched becomes a limiting factor, though perhaps to a lesser degree than canary and yelloweye in the north. Under the existing management framework, perhaps the best way of reducing darkblotched catch levels is to eliminate petrale opportunities in the winter months, to implement a 200 fathom depth restriction in the north for the entire year, and to reduce trip limits for co-occurring species (i.e. slope rockfish, Dover sole, and sablefish). In addition, trip limits for slope rockfish in the area between 40° 10' and 38° N. lat. may need to be reduced.

The Pacific whiting fisheries face difficulties under this alternative due to the small widow rockfish ACL. Under the existing management structure, one or more sectors of the Pacific whiting fishery may be prematurely closed due to attainment of a bycatch limit. However, under a rationalized fishery the widow rockfish ACL may be more manageable due to the ability of harvesters to fish later in the year when bycatch is lower, rather than fishing earlier due to race-for-fish incentives. It may still be reasonable to expect that Pacific whiting would be underutilized due to the constraints posed by the widow ACL under a rationalized fishery, though perhaps to a lesser degree than under the existing management framework.

Alternative 3

This alternative is designed to provide low slope opportunities, high shelf opportunities, and midwater opportunities that are similar to status quo. The ACLs for canary, bocaccio, and cowcod allow for increased opportunities on the shelf in the south. Under the existing management framework, this may very likely lead to increased opportunities for species such as chilipepper rockfish. In the north, shelf opportunities are greater than in Alternative 2, but yelloweye continues to limit opportunities (as it does under any of the scenarios) in spite of the larger canary ACL. For this reason, trip limits and RCA boundaries in the north are likely to be similar to status quo.

Slope opportunities are largely the same between this alternative and Alternative 2. Opportunities for the Pacific whiting fishery are greater under Alternative 3 compared to Alternative 2, but determining the degree to which the fishery might be constrained is made difficult based on the uncertainty regarding the increase in widow interaction within the fishery due to increasing abundance. Expectations regarding the constraint on the whiting fishery are further confounded by the ability of the fishery to adjust timing to avoid bycatch under a rationalized fishery. In general, while the constraint upon the whiting fishery under Alternative 3 may be less than the constraint upon the fishery under Alternative 2, widow rockfish is bound to be problematic for the fishery nevertheless. It is unknown whether a rationalized fishery will be able to successfully avoid widow rockfish, but under the existing management framework, one or more sectors of the whiting fishery may be closed prematurely under this alternative.

Alternative 4

Alternative 4 is described as providing relatively high slope opportunities, midwater opportunities that are more constrained than status quo, and higher shelf opportunities. Midwater opportunities are constrained in this case because of canary rockfish rather than widow rockfish. Slope opportunities are greatest in this alternative compared to all other alternatives. Under the existing management framework, slope opportunities are likely to be liberalized through a seaward RCA boundary in the north that is set at 150 fathoms for part of the year and trip limits on slope rockfish that allow for some targeting. Shelf opportunities would be similar to those in Alternative 2.

Alternative 5

Under Alternative 5 midwater opportunities would be similar to Alternative 2. Shelf rockfish in the north would be slightly more relaxed than Alternatives 2 and 4, but just barely due to yelloweye. Minor shelf rockfish in the south is similar to status quo fishing opportunities under

the existing management framework. Slope is similar to status quo, with perhaps a slight liberalization compared to the existing management framework.

Alternative 6

Alternative 6 would provide increased opportunities for both shelf and slope species. Under this scenario not only would whiting be relatively unconstrained, but a target fishery could be developed on widow and yellowtail, though it would be constrained by canary to some degree. Shelf opportunities are liberalized compared to status quo, but yelloweye continues to be a limiting factor in the north. Slope rockfish opportunities are liberalized compared to status quo.

Alternative 7

Alternative 7 is basically status quo, but with some limitations placed on slope opportunities due to darkblotched.

Alternative 8

This alternative is essentially the same as status quo with some opportunities for a small midwater fishery on widow and yellowtail and greater opportunities on the shelf in the south (i.e. there could be some chilipepper opportunity).

Alternative 9

Alternative 9 is similar to status quo on the shelf, but with slightly greater opportunities in the north. The higher availability of widow and canary would provide opportunities for a directed midwater fishery on widow and yellowtail. Increased access to POP and darkblotched would allow for slightly greater opportunities on the slope in the north compared to status quo. Opportunities on the shelf in the south would be essentially the same as in Alternative 5.

Considerations and guidance on accountability measures

Annual Catch Targets

In March 2009, the Council considered an evaluation of the effectiveness of the current groundfish management system to prevent overfishing in consideration of the annual catch target (ACT) specifications under the Groundfish Fishery Management Plan (FMP) Amendment 23 (Agenda Item 3.4.a Attachment 4, March 2009). This is reflected in Table 3 below. This document presented considerations for how to manage fisheries consistent with new National Standard 1 guidelines, relative to implementing accountability measures (AMs) that will be designed to help prevent fisheries from attaining or exceeding the annual catch limits (ACLs). The guidelines recommend consideration for a further yield buffer, termed the annual catch target (ACT), which can be set equal to or below the ACL if there is great uncertainty in the ability of the management system to effectively keep total fishing mortality below the prescribed ACL. An ACT does not need to be specified if there are effective AMs, such as an inseason monitoring program, that can be demonstrated to keep harvest below the ACL. In March 2009, the Council recommended having ACTs in the FMP as an accountability measure that could be considered during the biennial harvest specifications and management measures.

The performance standard recommended in the new NS1 guidelines for AMs is ACLs cannot be exceeded more often than once in four years. In the March 2009 considerations document, total

catch estimates of stocks and stock complexes with specified OYs were compared with the specified OY during 1999-2007 to evaluate the effectiveness of the current management system to stay within specified OYs.

Table 3. Instances when groundfish OYs have been exceeded in the recent management period, 1999-2007.

Species	Year OY was exceeded	Specified total catch OY (mt)	Estimated total catch (mt)	Percent of OY overage
Bocaccio	2000	100	112.0	12.0%
	2001	100	109.0	9.0%
Cabezon (CA)	2004	69	101.8	47.5%
	2005	69	85.4	23.8%
Canary	2001	93	133.0	43.0%
	2002	93	98.1	5.5%
	2003	44	59.9	36.1%
	2004	47	50.3	6.3%
	2005	47	60.4	29.1%
	2006	47	62.0	31.9%
	2007	44	44.7	1.6%
Darkblotched	2001	130	274.0	110.8%
	2002	168	179.0	6.5%
	2004	240	252.0	5.0%
Dover sole	2005	7,476	7,507.0	0.4%
	2006	7,564	7,730.0	2.2%
Petrale sole	2005	2,762	2,960.0	7.2%
POP	2001	303	307.0	1.3%
	2007	150	156.0	4.0%
Sablefish	2008	5934	6078	0.3%
Shortspine	1999	805	1,001.0	24.3%
	2000	970	1,037.0	6.9%
	2002	955	960.0	0.5%
	2003	955	1,014.0	6.2%

The canary rockfish management challenge has been extreme. This species is caught in all groundfish fisheries by a variety of gears and has therefore been one of the most constraining stocks limiting fishing opportunities since it was declared overfished in 2000. It is also apparent that the patterns of canary rockfish distribution, both seasonally and from year to year, are relatively unpredictable. **The GMT recommends that the Council consider setting an ACT for all of the canary rockfish ACL alternatives in the 2011-2012 analyses.**

Other species' OY overages are a little more easily explained and the result of either human error (e.g., petrale sole in 2005), poor catch monitoring systems that have since been improved (e.g., bocaccio in 2000 and 2001), or a relatively rare and unexpected bycatch event (e.g., POP in 2007). Considerations for these species are presented in Agenda Item 3.4.a Attachment 4, March

2009. The GMT also described that the OY overage for sablefish reported for 2008 were due to a coding error in the Pacific Fishery Information Network (PacFIN) Quota Species Monitoring (QSM) system that resulted in approximately 400 mt of catch going unreported inseason (Agenda Item G.4.b Supplemental GMT Report, November 2009).

Harvest Guidelines and/or ACTs

The GMT considered NS1 guidelines that describe ACTs as tool to keep catch at or below the ACL if there is uncertainty in the ability of the management system to effectively keep total fishing mortality below the prescribed ACL or if there is uncertainty in quantifying the true catch amounts. The GMT considered how the use of ACTs under FMP Amendment 23 might interact or overlap with the use of harvest guidelines (HGs). In recent years, the Council has chosen to set HGs for many species, including those that are managed most directly by the three west coast states, for set asides and for region specific specifications. The Council could choose to recommend that the definition of ACTs (under FMP Amendment 23) that would fold in the functionality of HGs. The GMT considered the potential complication with the ability of California to take automatic action when something is called an HG but that they may not have that option if it's an ACT. The GMT defers to California delegates to clarify this potential issue for the record.

The GMT requests clarification on whether or not NS1 guidelines indicate that some management action **MUST** be taken (i.e. fishery closure) if an ACT is projected to be exceeded, or whether it is more similar to the way HGs are used now, where it is a guideline and does not function as a hard cap that cannot be exceeded.

The GMT requests Council guidance on how they would like to use ACTs and HGs for 2011-2012.

Implications of ACL and Catch Sharing Options for 2011-2012 Fisheries

Recreational Fisheries

California Recreational Fisheries

The Northern and North-Central North of Pt. Arena Management Areas will continue to be constrained by yelloweye rockfish. In the North-Central South of Point Arena and South-Central Management Areas, blue rockfish and minor Nearshore rockfish are potential constraints on the season length, while yelloweye and canary rockfish have constrained the maximum allowable depth restrictions. The Southern Management Area is constrained by cowcod and bocaccio impacts. Proposed management measures will be designed to remain within the recreational harvest guidelines resulting from the Councils preferred ACLs and biennial catch apportionments for these species.

The following is an analysis of recreational fishing opportunity in the California recreational fishery relative to each of the ACL and catch sharing options for each overfished species impacted by the recreational fishery (Tables 4-7). The current depth and season restrictions in the California recreational fishery are provided in Figure 1. below. For each catch sharing alternative, the implications of each ACL alternative relative to the 2010 depth and season is

provided. Since the harvest limits for 2011 and 2012 do not differ substantially for a given pair of ACL option and catch sharing options, the implications for future fishing opportunity in the tables below apply to both years.

At any yelloweye rockfish ACL level, selection of the 2005-2006 specifications and management measures EIS or 2007-2008 EIS catch sharing would result in severe season length reductions in the North-Central North of Point Arena Management Area and may also require a reduction in the season length in the Northern or North-Central South of Point Arena Management Areas to remain within the yelloweye rockfish harvest guidelines. With the March 2009 scorecard, 2009-2010 EIS or 2005-2006 EIS catch sharing, selection of yelloweye rockfish ACLs less than 20 mt would also require severe reductions in the season length in the North-Central South of Point Arena and potential reductions in the other management areas. Under the 2007 catch sharing option, selection of an ACL less than 13 mt would necessitate similar reductions in season lengths.

Though the canary rockfish impacts for the California recreational fishery in 2009 were far below the 22.9 mt HG, the catch of Canary rockfish in the recreational fishery are variable and this residual buffer between projected impacts and the HG should be maintained to prevent the need for inseason action to close the season early. Such early closures are disruptive to vacation plans of fishery participants and the economic interests of local communities and charter boat operators. Any canary rockfish ACL and catch sharing combination that results in a recreational HG less than 15 mt may necessitate proactive reduction of depth restriction in the South-Central and North-Central South of Point Arena Management Area. More severe reductions will require reductions in season lengths in these areas.

Any bocaccio ACL alternative and catch sharing combination that results in a recreational HG less than the current HG of 67.3 mt may necessitate reduction of the current 2 fish bocaccio bag limit, resulting in wastage through increased discard mortality. At lower HGs, reduction of depth restriction in the Southern, South-Central and North-Central South of Point Arena Management Areas may be necessary. At the most conservative ACL options under the 2007-2008 EIS Scorecard and 2005-2006 EIS catch sharing catch sharing options, season lengths may have to be reduced in these areas.

The current cowcod harvest guideline of .3 mt was based on projected impacts from the RecFISH model in a past biennial management cycle and though the recreational fishery has been able to remain below this harvest guideline with status quo regulations, it constrains the depth restriction in the Southern Management Area. If an ACL alternative and catch sharing option resulting in a lower HG was selected by the Council for 2011-2012, the depth restriction or season length in the Southern management area may need to be reduced to remain within the HG.

Figure 1. 2010 Recreational Groundfish Seasons by Management Area

Management Area	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Northern	CLOSED				Open May 15–Sep 15 < 20 fm.				CLOSED				
North-Central N. of Pt. Arena	CLOSED				Open May 15–Aug 15 < 20 fm.			CLOSED					
North-Central S. of Pt. Arena	CLOSED					Open Jun 13–Oct 31 < 30 fm.				CLOSED			
Monterey South-Central Morro Bay South-Central	CLOSED				Open May 1–Nov 15 < 40 fm.							CLOSED	
Southern	CLOSED		Open Mar 1–Dec 31 < 60 fm.										

Table 4. Constraints on the California recreational fishery posed by various ACL and catch sharing options for Yelloweye Rockfish in the 2011 and 2012 season.

Alt	Action
5, 6	Maintain status quo season lengths in the North-Central North of Point Arena Management Area, while allowing a considerable increase in fishing opportunity in the Northern, North-Central South and South-Central Management Areas.
4	Two week reduction in the season length north in the North-Central North of Point Arena or a further decrease in the North-Central North of Point Arena to increase season lengths south of point Arena.
3	One to two month reduction in season lengths in the North-Central South of Point Arena.
2	One to two month reduction in season lengths in the North-Central South of Point Arena and reduced season lengths in the Northern and North-Central Management Area.
1	Total closure of fisheries Coastwide.

Table 5. Constraints on the California recreational fishery posed by various ACL and catch sharing options for Canary Rockfish in the 2011 and 2012 season.

Alt	Action
3,4,5,6	No constraint relative to current season lengths and depths.
2	Potential reduction of depth restrictions in the North-Central South of Point Arena Management Area.
1	Total closure of fisheries Coastwide.

Table 6. Constraints on the California recreational fishery posed by various ACL and catch sharing options for bocaccio in the 2011 and 2012 season.

Alt	Action
3, 4, 5	No constraint relative to current season lengths and depths.
2	Potential reduction of depth bag limits Coastwide and depth restrictions in the Southern or South Central Management Area.
1	Total closure of fisheries Coastwide.

Table 7. Constraints on the California recreational fishery posed by various ACL and catch sharing options for cowcod in the 2011 and 2012 season.

Alt	Action
5	No constraint relative to current season lengths and depths.
2, 3, 4	Potential reduction of depth restrictions in the Southern Management Area.
1	Total closure of fisheries coastwide.

Oregon Recreational

Currently the Oregon recreational fisheries operate under a 2.4 mt harvest cap for yelloweye rockfish, the most limiting of the overfished species. In the Oregon recreational fishery model changes to the seasonal depth restrictions have more influence on the level of yelloweye rockfish impacts than other management measures. Figure 1 in Agenda Item I.4.b. ODFW Report 1 shows seasonal-depth closures options that will result in a range of yelloweye impacts. In all options, the halibut quota is assumed to be similar to the 2010 level, the Stonewall Bank YRCA, bag limit and non-retention of groundfish in the all-depth halibut fishery all remain status quo. Any yelloweye allocation that is lower than status quo will require further restrictions to the seasonal depth restrictions. Any allocation that is higher than status quo might allow for liberalization of the seasonal depth restrictions, or allow for retention of lingcod in the all-depth halibut fishery. Table 8 shows management actions based on the yelloweye ACL alternatives, and sector catch sharing based on the March 2009 scorecard (Council guidance at the November 2009 meeting).

Table 8. Management actions necessary for the yelloweye ACL alternatives.

Alt	Oregon Recreational Management Actions
1	Total closure of groundfish and halibut fisheries
2	Extremely limited (or no) groundfish or halibut fisheries
3	Restrictions to the seasonal depth restrictions (move inside 30, 25 or 20 fm)
4	Status quo
5, 6	Minor liberalization of the seasonal depth restrictions (more all-depth months), or lingcod retention in the all-depth halibut fishery

Washington Recreational Catch Share Alternatives

Limited yelloweye rockfish harvest amounts are the primary factor that constrains the Washington recreational fishery. The constraints are most significant in Washington’s central and northern areas where yelloweye encounter rates are the highest. Management measures that limit the fishery to the area shoreward of 20 or 30 fathoms and complete area closures (YRCAs) have been necessary to keep yelloweye impacts below Washington’s harvest guideline amounts. ACL alternative 1 would result in complete closure of recreational fisheries. ACL alternative 2 would eliminate the directed bottomfish fishing as the yelloweye harvest guideline would only be sufficient to allow for incidental catch in the recreational salmon fishery. ACL alternative 3 would allow the fishery to operate under status quo management measures with the possibility of inseason management action if catches were higher than estimated. Alternatives 4, 5 and 6 would allow for some liberalization of status quo management measures in the central and northern management areas.

Commercial Fisheries

Limited Entry and Open Access (“Non-Nearshore”) Fisheries

We examined the impacts of various combinations of over-fished species ACLs with three RCA strategies to help assist with the determination of the most appropriate ACLs needed to prosecute the limited entry and open access non-nearshore fisheries. Limited entry and open access fisheries were combined for this analysis. All analyses were conducted with a 150 fathom line 36° - 40°10' N. Potential overfished-species ACLs were therefore evaluated by modeling the 150 fathom line¹ (seaward-RCA line) for the area south of 40°10' N and using various combinations of 100, 125, or 150 fathom lines¹ for the following areas north of 40°10' N:

- 40°10' N. - Columbia/Eureka line (43° - 45.064° N.)
- Columbia/Eureka line - Cascade Head (43° - 45.064° N.)
- Cascade Head - Pt. Chehalis (45.064° - 46.888° N.)
- North of Pt. Chehalis (46.888° N.)

¹ This is the same area stratification we are using in the 2009-10 management cycle. We project effort among areas based on the observed distribution of sablefish landings north of 40°10' N. lat. (2002-2008). Bycatch encounter rates are based on average bycatch rate over 2002-2008. Bycatch projections assume the full sablefish allocation is harvested.

To analyze the integrated alternatives, we applied the Council's preliminary preferred ABC assuming a P^* of 0.45 and applying Option 1 for the 40-10 control rule, resulting in an ABC of 8,418. This ABC was then apportioned north and south of 36° N by assuming status quo (72% north and 28 % south).

Six RCA options were examined. The status quo RCA configuration includes all areas north of $40^\circ 10'$ N. at 100 fm except for the area between Columbia/Eureka line and Cascade Head, which is at 125 fm.

Yelloweye has been the major constraint on the non-nearshore fixed gear fisheries. Under current bycatch projections, an additional 0.1 mt would be needed to move the RCA line off the Columbia/Eureka line - Cascade Head area to 100 fm. To reduce yelloweye bycatch below 0.9 mt, the area north of Pt. Chehalis would need to be moved to 125 fm (reduction of 0.2 mt). As the Council is aware, moving this line would eliminate dogfish opportunity off of Washington. Moving all areas to 150 fm ("the minimum yelloweye" scenario) would reduce the projected yelloweye impact to 0.3 mt.

In addition, the Council's November 2009 preliminary preferred sector allocation would not provide sufficient canary rockfish bycatch impact for the limited entry portion of this non-nearshore fixed gear fishery. In 2010, the Council increased canary rockfish to 2.5 mt to reflect the increased bycatch rate in the fishery. The Council would have to push the RCAs deeper to reduce canary impacts. With all areas at 150 fm, the canary impact would drop to 1.6 mt.

Provide guidance on trawl/nontrawl allocations for species not covered under Amendment 21 necessary for rationalization

Under this agenda item, the Council will need to consider two year allocations for those species not formally allocated under Amendment-23. The GMT analyzed potential alternatives for informing two-year allocations, including using similar percentages to those used in the Council's final alternative for Amendment-21 and the WCGOP Total Mortality Reports.

In its final alternative, the Council chose long term allocations for trawl dominant species based on the years 2003-2005. The GMT used this as a starting place relative to informing a decision on two-year allocations for those Amendment-21 species which are not trawl dominant (i.e., minor shelf rockfish north and south of $40^\circ 10'$ N lat). Table 9 shows a range of percentages the Council could consider. In addition, the Council will need to make a one time allocation between the non-whiting and whiting trawl sectors for initial issuance of IQ. Table 10 shows some various percentages that could help inform a Council decision (unless they already chose a time period, but I can't remember right now)

Table 9. Summary of shelf catches in 2003-2007 based on Intersector Allocation

	2003	2004	2005	2006	2007	03-05 avg	05-07 avg
Other shelf rockfish N							
trawl	9.2%	27.7%	31.5%	66.1%	88.1%	22.8%	61.9%
non-trawl	90.8%	72.3%	68.5%	33.9%	11.9%	77.2%	68.5%
Other shelf rockfish S							
trawl	1.3%	4.1%	3.7%	0.0%	80.1%	3.0%	27.9%
non-trawl	98.7%	95.9%	96.3%	100.0%	19.9%	97.0%	72.1%

Table 10. Percent of total shoreside trawl catches caught by the whiting and non-whiting sectors, 1995-2005 (Intersector Allocation EIS??)

Stocks and Stock Complexes	Shoreside Trawl Sectors			
	1995-05 %		2003-05 %	
	Non-whiting	Whiting	Non-whiting	Whiting
Minor Shelf RF North	96.5%	3.5%	81.7%	18.3%
Minor Shelf RF South	100.0%	0.0%	100.0%	0.0%

The GMT also examined total catch using the total mortality reports as another way to inform two year allocations for those species not formally allocated under Amendment-21. Table 11 shows these results as well as possible percentages to inform non-whiting and whiting trawl sectors allocations for initial issuance of IQ.

Table 11. Summary of total mortality of shelf rockfish based on Total Mortality Reports

	2005	2006	2007	2008	Average
Other shelf rockfish N					
trawl	59.8%	66.1%	70.5%	44.4%	60.2%
<i>non-whiting</i>	74.0%	96.8%	89.5%	70.0%	82.6%
<i>whiting</i>	26.0%	3.2%	10.5%	30.0%	17.4%
non-trawl	40.2%	33.9%	29.5%	55.6%	39.8%
Other shelf rockfish S					
trawl	20.6%	6.6%	9.9%	11.8%	12.2%
non-trawl	79.4%	93.4%	90.1%	88.2%	87.8%

Longnose skate

Longnose skate has not been routinely sorted to species due to the lack of specified sorting requirement and many were landed as unspecified skate, making reconstructing historical landings more difficult. Longnose skate is caught primarily as bycatch in trawl fisheries, where most are discarded. In deciding two-year allocations for this species, the GMT scoped the availability of data to inform a decision but was unable to use the total mortality reports as a basis to inform a decision due to the lack of species specific sorting. For trawl dominant species

under Amendment-21, trawl:non-trawl allocations were set at 95%:5%. The Council could choose to employ a similar methodology for longnose skate.

Guidance on two year non-trawl limited entry and open access allocations

Sablefish south of 36° N lat has not been formally allocated to the limited entry and open access fisheries under Amendment 6 (unlike north of 36° N lat.). Generally speaking, limited entry sectors have higher trip limits than open access sectors. For sablefish in the Conception Area, the weekly trip limits in the limited entry and open access sectors have been set at similar levels. In 2009-10, the sablefish OY in the Conception Area increased significantly, which led to an increased volume of inseason requests for higher trip limits. The GMT requests Council guidance on whether or not it would like the limited entry sector to have greater access than open access (i.e, differential trip limits for the sector). This would facilitate future inseason requests for trip limit modifications.

GMT Recommendations:

1. Establish a petrale sole set aside and provide guidance on a range of ACLs (including any preliminary preferred), and any other considerations for analyzing rebuilding.
2. Consider setting an ACT for all of the canary rockfish ACL alternatives in the 2011-2012 analyses.
3. Provide guidance on how to use ACTs and HGs for 2011-2012.
4. Provide guidance on trawl/nontrawl allocations for species not covered under Amendment 21 necessary for rationalization.
5. Provide any guidance on trip limit structure for sablefish in the south.

Yelloweye

		March 2009 Scorecard											
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6	
Year (mt)	April 2010 (17 mt)	2011 (0 mt)	2012 (0 mt)	2011 (9 mt)	2012 (9mt)	2011 (13 mt)	2012 (13 mt)	2011 (17 mt)	2012 (17 mt)	2011 (20 mt)	2012 (20 mt)	2011 (20 mt)	2012 (21 mt)
LE Trawl- Non-Whiting	0.6	0	0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4
LE Trawl- Whiting	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OA: Directed	1.3	0	0	0.2	0.2	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.3
LE Fixed Gear	0.9	0	0	0.3	0.3	0.7	0.7	1.1	1.1	1.5	1.5	1.5	1.6
Rec: WA	2.7	0	0	0.7	0.7	1.8	1.8	2.8	2.8	3.6	3.6	3.6	3.9
Rec: OR	2.4	0	0	0.7	0.7	1.6	1.6	2.6	2.6	3.3	3.3	3.3	3.6
Rec: CA	2.8	0	0	0.7	0.7	1.8	1.8	2.9	2.9	3.7	3.7	3.7	4.0

		2009-2010 SPEX EIS											
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6	
Year (mt)	April 2010 (17 mt)	2011 (0 mt)	2012 (0 mt)	2011 (9 mt)	2012 (9mt)	2011 (13 mt)	2012 (13 mt)	2011 (17 mt)	2012 (17 mt)	2011 (20 mt)	2012 (20 mt)	2011 (20 mt)	2012 (21 mt)
LE Trawl- Non-Whiting	0.6	0	0	0.2	0.2	0.4	0.4	0.6	0.6	0.8	0.8	0.8	0.8
LE Trawl- Whiting	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OA: Directed	1.3	0	0	0.2	0.2	0.6	0.6	0.9	0.9	1.1	1.1	1.1	1.2
LE Fixed Gear	0.9	0	0	0.3	0.3	0.8	0.8	1.3	1.3	1.7	1.7	1.7	1.8
Rec: WA	2.7	0	0	0.7	0.7	1.7	1.7	2.7	2.7	3.4	3.4	3.4	3.7
Rec: OR	2.4	0	0	0.6	0.6	1.6	1.6	2.5	2.5	3.2	3.2	3.2	3.4
Rec: CA	2.8	0	0	0.7	0.7	1.7	1.7	2.8	2.8	3.6	3.6	3.6	3.8

		2007-2008 SPEX EIS											
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6	
Year (mt)	April 2010 (17 mt)	2011 (0 mt)	2012 (0 mt)	2011 (9 mt)	2012 (9mt)	2011 (13 mt)	2012 (13 mt)	2011 (17 mt)	2012 (17 mt)	2011 (20 mt)	2012 (20 mt)	2011 (20 mt)	2012 (21 mt)
LE Trawl- Non-Whiting	0.6	0	0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
LE Trawl- Whiting	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OA: Directed	1.3	0	0	0.5	0.5	1.2	1.2	1.9	1.9	2.4	2.4	2.4	2.6
LE Fixed Gear	0.9	0	0	0.5	0.5	1.1	1.1	1.8	1.8	2.3	2.3	2.3	2.5
Rec: WA	2.7	0	0	0.7	0.7	1.7	1.7	2.7	2.7	3.5	3.5	3.5	3.8
Rec: OR	2.4	0	0	0.7	0.7	1.6	1.6	2.6	2.6	3.3	3.3	3.3	3.6
Rec: CA	2.8	0	0	0.4	0.4	1.0	1.0	1.6	1.6	2.1	2.1	2.1	2.3

		2005-2006 SPEX EIS											
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6	
Year (mt)	April 2010 (17 mt)	2011 (0 mt)	2012 (0 mt)	2011 (9 mt)	2012 (9mt)	2011 (13 mt)	2012 (13 mt)	2011 (17 mt)	2012 (17 mt)	2011 (20 mt)	2012 (20 mt)	2011 (20 mt)	2012 (21 mt)
LE Trawl- Non-Whiting	0.6	0	0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4
LE Trawl- Whiting	0.0	0	0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4
OA: Directed	1.3	0	0	0.1	0.1	0.3	0.3	0.5	0.5	0.6	0.6	0.6	0.6
LE Fixed Gear	0.9	0	0	0.5	0.5	1.2	1.2	1.9	1.9	2.4	2.4	2.4	2.6
Rec: WA	2.7	0	0	0.7	0.7	1.7	1.7	2.6	2.6	3.4	3.4	3.4	3.6
Rec: OR	2.4	0	0	0.6	0.6	1.5	1.5	2.4	2.4	3.1	3.1	3.1	3.3
Rec: CA	2.8	0	0	0.7	0.7	1.7	1.7	2.8	2.8	3.6	3.6	3.6	3.8

		2008 Total Mortality Report											
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6	
Year (mt)	April 2010 (17 mt)	2011 (0 mt)	2012 (0 mt)	2011 (9 mt)	2012 (9mt)	2011 (13 mt)	2012 (13 mt)	2011 (17 mt)	2012 (17 mt)	2011 (20 mt)	2012 (20 mt)	2011 (20 mt)	2012 (21 mt)
LE Trawl- Non-Whiting	0.6	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LE Trawl- Whiting	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OA: Directed	1.3	0.0	0.0	0.5	0.5	1.3	1.3	2.0	2.0	2.6	2.6	2.6	2.8
LE Fixed Gear	0.9	0.0	0.0	0.2	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0
Rec: WA	2.7	0.0	0.0	0.7	0.7	1.6	1.6	2.6	2.6	3.3	3.3	3.3	3.5
Rec: OR	2.4	0.0	0.0	0.9	0.9	2.1	2.1	3.4	3.4	4.4	4.4	4.4	4.7
Rec: CA	2.8	0.0	0.0	0.5	0.5	1.1	1.1	1.8	1.8	2.3	2.3	2.3	2.5

		2007 Total Mortality Report											
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6	
Year (mt)	April 2010 (17 mt)	2011 (0 mt)	2012 (0 mt)	2011 (9 mt)	2012 (9mt)	2011 (13 mt)	2012 (13 mt)	2011 (17 mt)	2012 (17 mt)	2011 (20 mt)	2012 (20 mt)	2011 (20 mt)	2012 (21 mt)
LE Trawl- Non-Whiting	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LE Trawl- Whiting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OA: Directed	1.3	0.0	0.0	0.4	0.4	1.1	1.1	1.7	1.7	2.2	2.2	2.2	2.3
LE Fixed Gear	0.9	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4
Rec: WA	2.7	0.0	0.0	0.4	0.4	1.0	1.0	1.6	1.6	2.1	2.1	2.1	2.2
Rec: OR	2.4	0.0	0.0	0.5	0.5	1.2	1.2	1.9	1.9	2.4	2.4	2.4	2.6
Rec: CA	2.8	0.0	0.0	1.3	1.3	3.3	3.3	5.2	5.2	6.7	6.7	6.7	7.1

shaded cells = lower than the status quo

Canary		March 2009 Scorecard											
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6	
Year (mt)	April 2010 (105 mt)	2011 (0 mt)	2012 (0 mt)	2011 (49 mt)	2012 (51 mt)	2011 (69 mt)	2012 (72 mt)	2011 (102 mt)	2012 (107 mt)	2011 (128 mt)	2012 (134 mt)	2011 (155 mt)	2012 (162 mt)
LE Trawl- Non-Whiting	21.3	0	0	5.8	6.2	9.8	10.4	16.4	17.4	21.6	22.8	27.0	28.4
LE Trawl- Whiting	13.0	0	0	6.5	6.9	10.9	11.6	18.2	19.4	24.0	25.3	30.0	31.5
OA: Directed	3.6	0	0	1.0	1.1	1.8	1.9	2.9	3.1	3.9	4.1	4.8	5.1
LE Fixed Gear	2.5	0	0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5
Rec: WA	4.9	0	0	1.8	1.9	3.0	3.2	5.0	5.3	6.5	6.9	8.2	8.6
Rec: OR	16.0	0	0	5.8	6.2	9.7	10.3	16.2	17.2	21.3	22.5	26.7	28.0
Rec: CA	22.9	0	0	8.3	8.8	13.9	14.7	23.2	24.6	30.5	32.2	38.2	40.1

		2009-2010 SPEX EIS											
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6	
Year (mt)	April 2010 (105 mt)	2011 (0 mt)	2012 (0 mt)	2011 (49 mt)	2012 (51 mt)	2011 (69 mt)	2012 (72 mt)	2011 (102 mt)	2012 (107 mt)	2011 (128 mt)	2012 (134 mt)	2011 (155 mt)	2012 (162 mt)
LE Trawl- Non-Whiting	21.3	0	0	5.6	6.0	9.4	10.0	15.7	16.7	20.7	21.8	25.9	27.2
LE Trawl- Whiting	13.0	0	0	6.5	6.9	10.9	11.6	18.3	19.4	24.0	25.4	30.0	31.6
OA: Directed	3.6	0	0	1.0	1.1	1.7	1.8	2.8	3.0	3.7	3.9	4.7	4.9
LE Fixed Gear	2.5	0	0	0.4	0.4	0.6	0.6	1.0	1.1	1.3	1.4	1.7	1.8
Rec: WA	4.9	0	0	1.8	1.9	3.0	3.2	5.0	5.3	6.5	6.9	8.2	8.6
Rec: OR	16.0	0	0	5.8	6.2	9.7	10.3	16.2	17.2	21.4	22.5	26.7	28.1
Rec: CA	22.9	0	0	8.3	8.8	13.9	14.8	23.2	24.7	30.6	32.3	38.2	40.2

		2007-2008 SPEX EIS Scorecard											
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6	
Year (mt)	April 2010 (105 mt)	2011 (0 mt)	2012 (0 mt)	2011 (49 mt)	2012 (51 mt)	2011 (69 mt)	2012 (72 mt)	2011 (102 mt)	2012 (107 mt)	2011 (128 mt)	2012 (134 mt)	2011 (155 mt)	2012 (162 mt)
LE Trawl- Non-Whiting	21.3	0	0	7.1	7.5	11.9	12.6	19.8	21.0	26.1	27.5	32.6	34.3
LE Trawl- Whiting	13.0	0	0	4.2	4.5	7.1	7.5	11.8	12.5	15.5	16.4	19.4	20.4
OA: Directed	3.6	0	0	1.9	2.0	3.2	3.3	5.3	5.6	6.9	7.3	8.7	9.1
LE Fixed Gear	2.5	0	0	0.8	0.9	1.4	1.4	2.3	2.4	3.0	3.1	3.7	3.9
Rec: WA	4.9	0	0	1.5	1.6	2.6	2.7	4.3	4.5	5.6	5.9	7.0	7.4
Rec: OR	16.0	0	0	5.8	6.2	9.8	10.4	16.3	17.3	21.5	22.7	26.8	28.2
Rec: CA	22.9	0	0	8.0	8.6	13.5	14.4	22.6	24.0	29.7	31.4	37.1	39.0

		2005-2006 SPEX EIS											
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6	
Year (mt)	April 2010 (105 mt)	2011 (0 mt)	2012 (0 mt)	2011 (49 mt)	2012 (51 mt)	2011 (69 mt)	2012 (72 mt)	2011 (102 mt)	2012 (107 mt)	2011 (128 mt)	2012 (134 mt)	2011 (155 mt)	2012 (162 mt)
LE Trawl- Non-Whiting	21.3	0	0	6.7	7.2	11.3	12.0	18.8	20.0	24.8	26.1	30.9	32.5
LE Trawl- Whiting	13.0	0	0	6.1	6.5	10.3	10.9	17.2	18.2	22.6	23.8	28.2	29.7
OA: Directed	3.6	0	0	0.8	0.9	1.4	1.5	2.4	2.5	3.1	3.3	3.9	4.1
LE Fixed Gear	2.5	0	0	0.8	0.8	1.3	1.3	2.1	2.2	2.8	2.9	3.5	3.7
Rec: WA	4.9	0	0	1.7	1.8	2.8	3.0	4.7	5.0	6.2	6.5	7.7	8.1
Rec: OR	16.0	0	0	5.4	5.8	9.2	9.7	15.3	16.2	20.1	21.2	25.1	26.4
Rec: CA	22.9	0	0	7.8	8.3	13.1	13.9	21.9	23.2	28.8	30.4	36.0	37.8

		2008 Total Mortality Report											
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6	
Year (mt)	April 2010 (105 mt)	2011 (0 mt)	2012 (0 mt)	2011 (49 mt)	2012 (51 mt)	2011 (69 mt)	2012 (72 mt)	2011 (102 mt)	2012 (107 mt)	2011 (128 mt)	2012 (134 mt)	2011 (155 mt)	2012 (162 mt)
LE Trawl- Non-Whiting	21.3	0.0	0.0	12.9	13.7	21.7	23.0	36.1	38.3	47.6	50.2	59.4	62.5
LE Trawl- Whiting	13.0	0.0	0.0	4.7	5.0	7.9	8.4	13.2	14.0	17.4	18.3	21.7	22.8
OA: Directed	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LE Fixed Gear	2.5	0.0	0.0	1.7	1.8	2.8	2.9	4.6	4.9	6.1	6.4	7.6	8.0
Rec: WA	4.9	0.0	0.0	0.6	0.7	1.0	1.1	1.7	1.8	2.2	2.4	2.8	3.0
Rec: OR	16.0	0.0	0.0	2.6	2.8	4.4	4.7	7.3	7.8	9.6	10.2	12.0	12.7
Rec: CA	22.9	0.0	0.0	5.0	5.3	8.3	8.8	13.9	14.8	18.3	19.3	22.9	24.1

		2007 Total Mortality Report											
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6	
Year (mt)	April 2010 (105 mt)	2011 (0 mt)	2012 (0 mt)	2011 (49 mt)	2012 (51 mt)	2011 (69 mt)	2012 (72 mt)	2011 (102 mt)	2012 (107 mt)	2011 (128 mt)	2012 (134 mt)	2011 (155 mt)	2012 (162 mt)
LE Trawl- Non-Whiting	21.3	0.0	0.0	13.3	14.3	22.5	23.8	37.5	39.8	49.3	52.1	61.6	64.8
LE Trawl- Whiting	13.0	0.0	0.0	2.8	3.0	4.8	5.0	7.9	8.4	10.4	11.0	13.0	13.7
OA: Directed	3.6	0.0	0.0	2.8	3.0	4.8	5.0	7.9	8.4	10.4	11.0	13.0	13.7
LE Fixed Gear	2.5	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3
Rec: WA	4.9	0.0	0.0	0.8	0.8	1.3	1.4	2.2	2.3	2.9	3.0	3.6	3.8
Rec: OR	16.0	0.0	0.0	1.8	1.9	3.0	3.2	5.0	5.3	6.5	6.9	8.2	8.6
Rec: CA	22.9	0.0	0.0	7.7	8.2	12.9	13.7	21.6	22.9	28.4	30.0	35.5	37.4

shaded cells = lower than the status quo

Bocaccio		March 2009 Scorecard									
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
Year (mt)	April 2010 (288 mt)	2011 (0 Mt)	2012 (0 mt)	2011 (53 mt)	2012 (56 mt)	2011 (109 mt)	2012 (115 mt)	2011 (263 mt)	2012 (274 mt)	2011 (272 mt)	2012 (384 mt)
LE Trawl- Non-Whiting	16.1	0	0	6.8	7.3	16.5	17.5	43.1	45.0	64.4	64.0
LE Trawl- Whiting	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OA: Directed	5.3	0	0	2.3	2.4	5.5	5.8	14.3	14.9	21.3	21.2
LE Fixed Gear	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: WA	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: OR	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: CA	67.3	0	0	30.4	32.7	73.5	78.2	192.1	200.6	287.2	285.3

		2009-2010 SPEX EIS									
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
Year (mt)	April 2010 (288 mt)	2011 (0 Mt)	2012 (0 mt)	2011 (53 mt)	2012 (56 mt)	2011 (109 mt)	2012 (115 mt)	2011 (263 mt)	2012 (274 mt)	2011 (272 mt)	2012 (384 mt)
LE Trawl- Non-Whiting	16.1	0	0	4.7	5.0	11.3	12.0	29.6	30.9	42.6	43.9
LE Trawl- Whiting	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OA: Directed	5.3	0	0	4.1	4.4	9.9	10.6	26.0	27.1	37.4	38.5
LE Fixed Gear	0.0	0	0	5.1	5.5	12.3	13.1	32.2	33.6	46.4	47.8
Rec: WA	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: OR	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: CA	67.3	0	0	25.6	27.6	61.9	65.8	161.8	168.9	233.1	240.2

		2007-2008 SPEX EIS Scorecard									
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
Year (mt)	April 2010 (288 mt)	2011 (0 Mt)	2012 (0 mt)	2011 (53 mt)	2012 (56 mt)	2011 (109 mt)	2012 (115 mt)	2011 (263 mt)	2012 (274 mt)	2011 (272 mt)	2012 (384 mt)
LE Trawl- Non-Whiting	16.1	0	0	9.5	10.2	23.0	24.4	60.1	62.7	86.6	89.2
LE Trawl- Whiting	0.0	0	0	5.7	6.1	13.7	14.5	35.8	37.3	51.5	53.1
OA: Directed	5.3	0	0	2.5	2.7	6.1	6.5	16.0	16.7	23.0	23.7
LE Fixed Gear	0.0	0	0	1.1	1.2	2.6	2.8	6.8	7.1	9.9	10.2
Rec: WA	0.0	0	0	2.0	2.2	4.9	5.3	12.9	13.5	18.6	19.2
Rec: OR	0.0	0	0	7.8	8.4	18.9	20.1	49.4	51.6	71.2	73.4
Rec: CA	67.3	0	0	10.8	11.7	26.2	27.9	68.5	71.5	98.6	101.7

		2005-2006 SPEX EIS									
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
Year (mt)	April 2010 (288 mt)	2011 (0 Mt)	2012 (0 mt)	2011 (53 mt)	2012 (56 mt)	2011 (109 mt)	2012 (115 mt)	2011 (263 mt)	2012 (274 mt)	2011 (272 mt)	2012 (384 mt)
LE Trawl- Non-Whiting	16.1	0	0	9.0	9.7	21.8	23.2	57.0	59.5	82.2	84.7
LE Trawl- Whiting	0.0	0	0	8.2	8.9	19.9	21.2	52.0	54.3	75.0	77.3
OA: Directed	5.3	0	0	1.1	1.2	2.7	2.9	7.1	7.4	10.3	10.6
LE Fixed Gear	0.0	0	0	1.0	1.1	2.5	2.6	6.4	6.7	9.2	9.5
Rec: WA	0.0	0	0	2.3	2.4	5.5	5.8	14.3	14.9	20.5	21.2
Rec: OR	0.0	0	0	7.3	7.9	17.7	18.9	46.3	48.4	66.8	68.8
Rec: CA	67.3	0	0	10.5	11.3	25.4	27.0	66.3	69.2	95.5	98.4

		2008 Total Mortality Report									
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
Year (mt)	April 2010 (288 mt)	2011 (0 Mt)	2012 (0 mt)	2011 (53 mt)	2012 (56 mt)	2011 (109 mt)	2012 (115 mt)	2011 (263 mt)	2012 (274 mt)	2011 (272 mt)	2012 (384 mt)
LE Trawl- Non-Whiting	16.1	0.0	0.0	5.8	6.2	14.0	14.8	36.5	38.1	52.6	54.2
LE Trawl- Whiting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OA: Directed	5.3	0.0	0.0	0.8	0.9	2.0	2.2	5.3	5.5	7.6	7.9
LE Fixed Gear	0.0	0.0	0.0	0.3	0.3	0.7	0.7	1.8	1.8	2.5	2.6
Rec: WA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: OR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: CA	67.3	0.0	0.0	32.6	35.1	78.8	83.8	206.0	215.0	296.8	305.8

		2007 Total Mortality Report									
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
Year (mt)	April 2010 (288 mt)	2011 (0 Mt)	2012 (0 mt)	2011 (53 mt)	2012 (56 mt)	2011 (109 mt)	2012 (115 mt)	2011 (263 mt)	2012 (274 mt)	2011 (272 mt)	2012 (384 mt)
LE Trawl- Non-Whiting	16.1	0.0	0.0	2.8	3.1	6.9	7.3	17.9	18.7	25.8	26.6
LE Trawl- Whiting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OA: Directed	5.3	0.0	0.0	0.7	0.7	1.6	1.7	4.3	4.5	6.2	6.4
LE Fixed Gear	0.0	0.0	0.0	2.9	3.1	7.0	7.5	18.3	19.1	26.4	27.2
Rec: WA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: OR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: CA	67.3	0.0	0.0	33.1	35.6	80.0	85.0	209.0	218.2	301.1	310.3

shaded cells = lower than the status quo

Cowcod		March 2009 Scorecard									
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
	April 2010 (4 mt)	2011 (0 mt)	2012 (0 mt)	2011 (2 mt)	2012 (2 mt)	2011 (3 mt)	2012 (3 mt)	2011 (4 mt)	2012 (4 mt)	2011 (9 mt)	2012 (9 mt)
LE Trawl- Non-Whiting	1.5	0	0	1.6	1.6	2.5	2.5	3.4	3.4	8.1	8.1
LE Trawl- Whiting	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OA: Directed	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LE Fixed Gear	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: WA	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: OR	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: CA	0.3	0	0	0.1	0.1	0.2	0.2	0.3	0.3	0.6	0.6

		2009-2010 SPEX EIS									
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
	April 2010 (4 mt)	2011 (0 mt)	2012 (0 mt)	2011 (2 mt)	2012 (2 mt)	2011 (3 mt)	2012 (3 mt)	2011 (4 mt)	2012 (4 mt)	2011 (9 mt)	2012 (9 mt)
LE Trawl- Non-Whiting	1.5	0	0	1.5	1.5	2.3	2.3	3.2	3.2	7.5	7.5
LE Trawl- Whiting	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OA: Directed	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LE Fixed Gear	0.0	0	0	0.1	0.1	0.2	0.2	0.2	0.2	0.6	0.6
Rec: WA	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: OR	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: CA	0.3	0	0	0.1	0.1	0.2	0.2	0.2	0.2	0.6	0.6

		2007-2008 SPEX EIS Scorecard									
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
	April 2010 (4 mt)	2011 (0 mt)	2012 (0 mt)	2011 (2 mt)	2012 (2 mt)	2011 (3 mt)	2012 (3 mt)	2011 (4 mt)	2012 (4 mt)	2011 (9 mt)	2012 (9 mt)
LE Trawl- Non-Whiting	1.5	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
LE Trawl- Whiting	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OA: Directed	0.0	0	0	0.3	0.3	0.5	0.5	0.6	0.6	1.5	1.5
LE Fixed Gear	0.0	0	0	0.3	0.3	0.5	0.5	0.6	0.6	1.5	1.5
Rec: WA	0.0	0	0	0.4	0.4	0.7	0.7	0.9	0.9	2.2	2.2
Rec: OR	0.0	0	0	0.4	0.4	0.7	0.7	0.9	0.9	2.1	2.1
Rec: CA	0.3	0	0	0.3	0.3	0.4	0.4	0.6	0.6	1.3	1.3

		2005-2006 SPEX EIS									
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
	April 2010 (4 mt)	2011 (0 mt)	2012 (0 mt)	2011 (2 mt)	2012 (2 mt)	2011 (3 mt)	2012 (3 mt)	2011 (4 mt)	2012 (4 mt)	2011 (9 mt)	2012 (9 mt)
LE Trawl- Non-Whiting	1.5	0	0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2
LE Trawl- Whiting	0.0	0	0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2
OA: Directed	0.0	0	0	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.4
LE Fixed Gear	0.0	0	0	0.3	0.3	0.5	0.5	0.6	0.6	1.5	1.5
Rec: WA	0.0	0	0	0.4	0.4	0.7	0.7	0.9	0.9	2.1	2.1
Rec: OR	0.0	0	0	0.4	0.4	0.6	0.6	0.8	0.8	1.9	1.9
Rec: CA	0.3	0	0	0.4	0.4	0.7	0.7	1.0	1.0	2.3	2.3

		2008 Total Mortality Report									
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
	April 2010 (4 mt)	2011 (0 mt)	2012 (0 mt)	2011 (2 mt)	2012 (2 mt)	2011 (3 mt)	2012 (3 mt)	2011 (4 mt)	2012 (4 mt)	2011 (9 mt)	2012 (9 mt)
LE Trawl- Non-Whiting	1.5	0.0	0.0	0.9	0.9	1.4	1.4	1.9	1.9	4.4	4.4
LE Trawl- Whiting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OA: Directed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LE Fixed Gear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: WA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: OR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: CA	0.3	0.0	0.0	0.9	0.9	1.4	1.4	1.9	1.9	4.4	4.4

		2007 Total Mortality Report									
Alternative	Status Quo	Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
	April 2010 (4 mt)	2011 (0 mt)	2012 (0 mt)	2011 (2 mt)	2012 (2 mt)	2011 (3 mt)	2012 (3 mt)	2011 (4 mt)	2012 (4 mt)	2011 (9 mt)	2012 (9 mt)
LE Trawl- Non-Whiting	1.5	0.0	0.0	1.5	1.5	2.4	2.4	3.4	3.4	7.9	7.9
LE Trawl- Whiting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OA: Directed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LE Fixed Gear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: WA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: OR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rec: CA	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

shaded cells = lower than the status quo