GROUNDFISH MANAGEMENT TEAM REPORT ON PACIFIC WHITING HARVEST SPECIFICATIONS AND MANAGEMENT MEASURES FOR 2007

The Groundfish Management Team (GMT) reviewed the Pacific Hake (whiting) stock assessment and Stock Assessment Review (STAR) Panel report. As with last year's assessment, the STAR Panel recommended acceptance of two equally plausible models (q=1, effective q=0.7) to represent the uncertainty in the relative depletion level and productivity of the stock. When q was fixed at 1 the estimates of biomass were lower than when q was estimated with an effective q=0.7. Also similar to last year's assessment, the greatest difference from the q=1 to the q estimated scenario was a global scaling upward in total biomass and a slightly lower level of depletion in 2007.

Whiting Stock Depletion and Risk Assessment

Both models contain a robust trend that show declining biomass in the foreseeable future. The projected optimum yields (OYs) under either model indicate that if the entire 40-10 adjusted OY for 2007 were harvested, the harvest rates and total catches would be among the highest ever observed. Year class trends suggest that the stock is still heavily comprised of the 1999 year class, with near average recruitment from the 2003 and 2004 year classes. There is no indication of another strong year class emerging. As a consequence, the management decisions facing the Council with respect to whiting harvest levels are strikingly similar to those faced in 2006; stock size is projected to continue declining even with greatly reduced harvest rates, but with more substantial declines with harvest levels closer to the status quo.

The GMT expressed concerns with the two equally plausible models and recommends that the Council consider prioritizing research and analysis that would help inform model selection, as well as continue investigating alternate models that were discussed at the STAR Panel. As in 2006, the GMT has provided OY options based on a blended model for Council consideration (Table 2).

The GMT notes that management of the whiting fishery is in transition from the Groundfish Fishery Management Plan (FMP) to the Pacific Whiting Treaty legislation where there is no minimum stock size threshold designated. The GMT would like to point out that the minimum stock size designated under the FMP (25% of unfished biomass, or B_0) may still be a useful reference point for stock sustainability, although the Groundfish Harvest Policy Evaluation Workshop Report (Agenda Item E.1) raised questions regarding the effectiveness of this rule for species with highly variable recruitment, such as whiting. If the Council chooses to follow the guidance outlined in the FMP for 2007 whiting, the GMT suggests that overfished thresholds should not be considered as targets, but rather as benchmarks that identify concern.

Sector Allocations and Estimated Bycatch Impacts

Sector allocations and estimated bycatch of overfished species associated with potential OY values are reported in Table 2. These five coastwide OY values were intended to bracket status quo (364,197 mt) with substantially lower and higher OYs (265,528 mt and 400,000 mt). Bycatch estimates for the 2007 whiting season were developed using the weighted average approach, similar to that used in 2004, 2005, and 2006 to predict mortality of canary, darkblotched, POP, and yelloweye. The GMT deviated from this practice for widow rockfish which shows an increasing trend and estimated widow bycatch based on a linear interpolation of the bycatch rate from 2004-2006. Bycatch rates from 2003 through 2006 are found in Figures 1-3.

In March 2004, the Council approved the inclusion of bycatch limits as a management tool available for the 2005 and 2006 fishery, and as part of this agenda item, the Council should consider continuing to use this approach in 2007. Two approaches to bycatch limit management were discussed for the nontribal sectors: fleetwide limits and sector specific limits. However, sector-specific limits likely require greater monitoring than is currently in place. Although each sector of the whiting fishery is monitored for total catch, only the at-sea sectors have a catch tracking system in place that can provide independent total catch estimates in a near real-time manner. The GMT discussed a bycatch limit for the at-sea sectors, however this would require analysis of the monitoring in all sectors to determine if it is adequate to support sector specific limits. Therefore, sector specific bycatch limits are not available for 2007.

From 2004 to 2006, participants in the Pacific whiting fishery were able to demonstrate successful avoidance of overfished species sufficient to stay within established bycatch limits, thereby attaining higher levels of whiting catch relative to predicted bycatch. However, unpredictable events of high bycatch may still occur.

Management Considerations for the 2007 Fishery

Since 2004, the Council has included bycatch limits as a management tool for use in the whiting fishery and the Council may wish to consider establishing similar bycatch limits for the 2007 fishery. A summary of bycatch limits from previous years are presented in the table below.

Table 1. Previous range of bycatch limits (mt) set by the Council for the non-tribal whiting fishery.

	2004	2005	2006	2007[a]
Canary	6.2 – 7.3	4.7	4.0 – 4.7	4.7 [b]
Darkblotched	9.5	n/a	25	25
Widow	n/a	200 – 212	200 – 220	200

[a]Year 2007 values represent the numbers currently outlined in the Federal Regulations, which can be modified by the Council under inseason action.

[b] Agenda Item B.5 Inseason, had an incorrect bycatch limit listed for the non-tribal whiting fishery (4.0 mt). Council staff checked records from previous Council action and this bycatch limit was only intended to apply during the end of 2006.

The GMT notes that the bycatch limits in the scorecard are not allocations and they may be changed inseason.

Summary

The GMT would like to draw the Council's attention to several considerations when managing the Pacific whiting fishery:

ABC

1. In 2006, the Council chose to set the ABC based on q=1.

OY

1. The Council could consider managing under the 40-10 harvest control rule, and follow the FMP guidance of staying above 25% of unfished biomass.

   Table 2 provides depletion levels under various OY assumptions to help inform the Council. If the Council continues to use the 40-10 harvest control rule, and follows the FMP guidance of staying above 25% of unfished biomass, then the GMT recommends that an OY is chosen that keeps the stock above 25% of unfished biomass for a minimum of two years.

2. The Council could set U.S. whiting OY constrained relative to bycatch rates.

   The Council could set a U.S. whiting OY constrained by the predicted bycatch of canary, darkblotched, and widow rockfish. The current status quo non-tribal bycatch limits for all three overfished species (canary, darkblotched, and widow rockfish) corresponds to a U.S. OY of 223,220 mt.

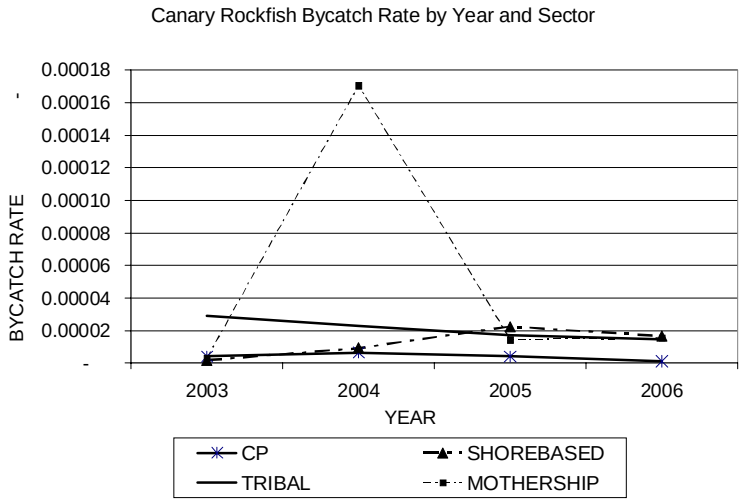
3. The Council could set the U.S. whiting OY independent of bycatch rates.

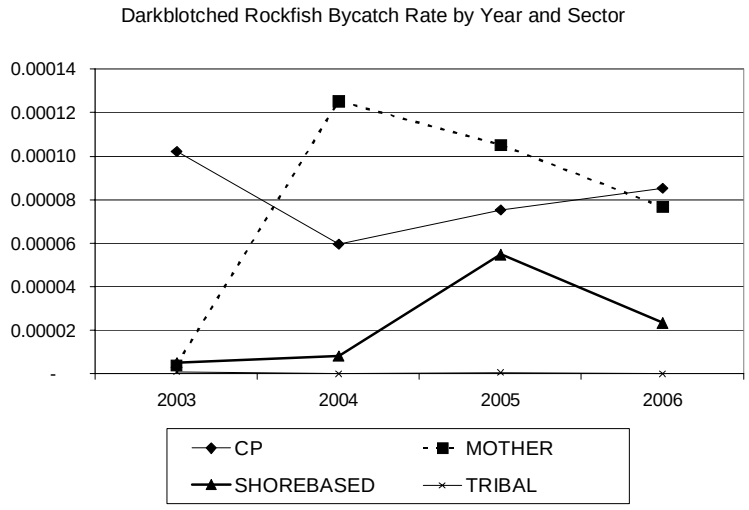
   The Council could set species bycatch limits that reasonably accommodate the fishery and close the whiting fishery sectors when the sector allocations are attained, or when a whiting fishery bycatch limit is reached – whichever comes first. The OY still needs to be set within a reasonable level relative to the bycatch limits to prevent premature fishery closure prior to OY attainment. If current bycatch limits are in place, the non-tribal fishery would close when their sector reaches 4.7 mt of canary, or when the total non-tribal whiting sector catch of widow reaches 200 mt, or when the total non-tribal whiting sector catch of darkblotched reaches 25 mt, or when the whiting OY is attained.

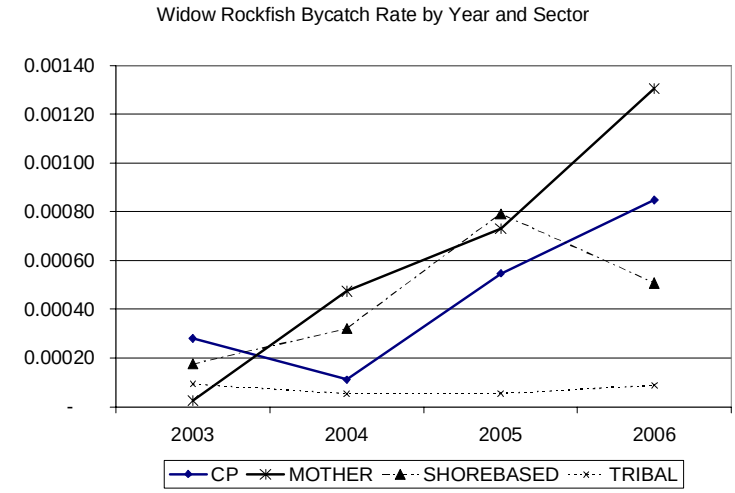
Relative to bycatch limits, the GMT recommends that, under this agenda item, the Council decide whether they want to continue using bycatch limit management in the Pacific whiting fishery for canary, widow, and/or darkblotched and whether other groundfish sectors' bycatch should be accommodated prior to setting the amount for any whiting bycatch limit. If so, the GMT notes that bycatch estimates for all fisheries in 2007 will be provided in an updated 2007 bycatch scorecard during Agenda Item E.5, Consideration of Inseason Adjustments. The scorecard will reflect the quantity of OYs not assigned to any fishery and may inform the Council when setting bycatch limits for the whiting fishery, should the Council adopt bycatch limits under this agenda item.

GMT Recommendations:

1. Adopt a coastwide ABC
2. Adopt a coastwide and U.S. whiting OY
3. Continued use of non-tribal fleetwide bycatch limits as a management tool







Figures 1 – 3. Bycatch rates in the whiting fishery for canary, darkblotched, and widow rockfish.

Table 2: Relative depletion levels for various OYs in 2009 and 2010 and predictions of associated bycatch (using blended model).

								Qmid	
Coastwide OY	**US OY**	**Sector**	**Allocation**	**Canary**	**Darkblotched**	**POP**	**Widow**	Depletion in 2009	Depletion in 2010
400,000	294,998	Tribal	35,000	0.7	0.0	0.5	2.5	24.3%	20.7%
(largest constant harvest in decision table)		Mothership	62,045	2.8	5.4	1.2	106.8		
		CP	87,897	0.3	6.9	1.9	106.9		
		Shoreside	108,578	1.7	3.0	0.4	56.7		
		non-tribal total	258,520	4.8	15.4	3.6	270.4		
		Total	293,520	5.4	15.4	4.1	272.9		
368,187	271,536	Tribal	35,000	0.7	0.0	0.5	2.5	25.0%	21.7%
(OY = 25% in 2009)		Mothership	56,404	2.5	4.9	1.1	97.1		
		CP	79,906	0.3	6.3	1.7	97.2		
		Shoreside	98,707	1.5	2.8	0.4	51.5		
		non-tribal total	235,017	4.4	14.0	3.2	245.8		
		Total	270,017	5.0	14.0	3.8	248.3		
364,842	269,069	Tribal	35,000	0.7	0.0	0.5	2.5	25.1%	21.8%
(status quo)		Mothership	55,697	2.5	4.9	1.1	95.9		
		CP	78,903	0.3	6.2	1.7	96.0		
		Shoreside	97,469	1.5	2.7	0.4	50.9		
		non-tribal total	232,069	4.3	13.8	3.2	242.7		
		Total	267,069	5.0	13.8	3.8	245.2		
302,673	223,220	Tribal	30,000	0.6	0.0	0.5	2.2	26.6%	23.9%
(OY that is constrained by bycatch projections)		Mothership	45,893	2.1	4.0	0.9	79.0		
		CP	65,015	0.2	5.1	1.4	79.1		
		Shoreside	80,312	1.2	2.2	0.3	41.9		
		non-tribal total	221,220	3.5	11.4	2.6	200.0		
		Total	221,220	4.1	11.4	3.1	202.2		
265,528	195,825	Tribal	27,500	0.5	0.0	0.4	2.0	27.4%	25.0%
(OY = 25% in 2010)		Mothership	40,001	1.8	3.5	0.8	68.9		
		CP	56,669	0.2	4.5	1.2	68.9		
		Shoreside	70,002	1.1	2.0	0.3	36.6		
		non-tribal total	166,672	3.1	9.9	2.3	174.3		
		Total	194,172	3.6	9.9	2.7	176.3		