

DRAFT Minutes
Ad Hoc Allocation Committee Teleconference

May 21, 2002

Members Present:

Dr. Hans Radtke, Chairman, Pacific Fishery Management Council
Mr. LB Boydston, California Department of Fish and Game
Mr. Mark Saelens, Oregon Department of Fish and Wildlife (acting member)
Mr. Phil Anderson, Washington Department of Fish and Wildlife
Mr. Bill Robinson, Northwest Region National Marine Fisheries Service

Others Present:

Ms. Eileen Cooney, General Counsel, National Oceanic and Atmospheric Administration
Dr. Jim Hastie, Northwest Fisheries Science Center National Marine Fisheries Service
Mr. Rod Moore, West Coast Seafood Processors Association
Dr. Steve Freese, National Marine Fisheries Service
Mr. Steve Copps, National Marine Fisheries Service
Ms. Yvonne deReynier, Northwest Region National Marine Fisheries Service
Ms. Becky Renko, Northwest Region National Marine Fisheries Service
Mr. Jim Glock, National Marine Fisheries Service
Mr. Jim Morgan, Southwest Region National Marine Fisheries Service
Ms. Marija Vojkovich, California Department of Fish and Game
Mr. Dave Thomas, California Department of Fish and Game
Ms. Marci Yaremko, California Department of Fish and Game
Mr. Guy Norman, Oregon Department of Fish and Wildlife
Mr. Burnie Bohn, concerned Oregon citizen
Mr. Brian Culver, Washington Department of Fish and Wildlife
Ms. Michele Robinson, Washington Department of Fish and Wildlife
Mr. Bob Strickland, United Anglers of California
Mr. Randy Fry, United Anglers of California
Ms. Karen Garrison, Natural Resources Defense Council
Mr. Bob Eaton, Pacific Marine Conservation Council
Mr. Peter Huhtula, Pacific Marine Conservation Council
Mr. Bob Osborn, United Anglers of California
Mr. Tom Raftican, United Anglers of California
Mr. Brian Peterson, Shrimp Producers Marketing Association
Dr. Donald McIsaac, Executive Director, Pacific Fishery Management Council
Mr. Ed Waters, Pacific Fishery Management Council staff
Mr. Dan Waldeck, Pacific Fishery Management Council
Mr. Jim Seger, Pacific Fishery Management Council staff
Mr. John DeVore, Pacific Fishery Management Council staff

A. Call to Order

Dr. McIsaac was asked to chair the meeting. Allocation Committee members, agency personnel, and public participants at the five listening stations were introduced.

B. Review and Approve Agenda

The agenda was approved after the addition of a new item: D.4 Other Management Alternatives.

C. Stock Assessment Update and Recommended Optimum Yields for 2003

1. GMT-recommended harvest level alternatives

Dr. Hastie reviewed the GMT-recommended harvest level alternatives for 2003 west coast groundfish fisheries (Table 2-1). He explained that harvest levels for all overfished species were ranged (low, medium, and high) from 50%-80% probabilities of rebuilding within the maximum allowable time. A sablefish harvest range was also provided since the stock assessment addressed two different states of nature hypotheses. The low range was provided by Dr. Schirripa at the request of the GMT to indicate a harvest control that projected spawning biomass increases in the next ten years (all other specifications showed slight declines over time as the 1999 and 2000 year classes became less prominent in the population). The medium and high sablefish harvest levels assumed an $F_{45\%}$ harvest rate under a density-dependent and regime shift hypothesis, respectively. The low harvest alternative assumed density dependence with an $F_{60\%}$ harvest. The GMT recommended the same 2002 harvest levels for all other species that were not assessed this year. The cowcod projections were expected later this week from Mr. Tom Barnes, CDFG. Canary rockfish projections were also not detailed pending a rebuilding analysis. The GMT was told the 2003 harvest projections for canary would range from about 20-50 mt.

Dr. Hastie was asked about the new yelloweye rebuilding projections- why did the numbers change so dramatically? He answered that the assessment author could not get the rebuilding program developed by Dr. Punt to work correctly using data from the northern areas in the assessment. Therefore, he used the "40-10" adjustment as a proxy in the north last year. The model was modified by Dr. Punt over the winter and used to project yelloweye rebuilding. Hence, the significant changes in OYs. Different projections in the Monterey area were the result of correcting length data used in model inputs.

Dr. Punt's rebuilding program was discussed in more detail. The Committee learned that all rebuilding analyses, except the one developed for cowcod, used Dr. Punt's program. Dr. Hastie thought the new cowcod projections were going to be generated from the program. The Committee also learned the SSC reviewed and endorsed the rebuilding program, although it was not clear that new versions of the program were subsequently reviewed. Does the model estimate future recruitments using density-dependence? Dr. Hastie explained how the program randomly draws either recruits or recruits per spawners. Density-dependence can be interjected by the choice of the recruitment time series (recent recruits or R/S). The SSC developed a Terms of Reference for how to do rebuilding analyses and project future recruitment. Therefore, the model inputs are not entirely ad hoc. The Committee wanted the SSC to review and comment on the new version of Dr. Punt's program at the June Council meeting.

Dr. Hastie was asked whether the GMT-recommended OYs in Table 2-1 were fixed (staged) harvest levels or based on fixed harvest rates? The Committee also wanted to know whether a fixed or staged constant harvest strategy would work for the most constraining species. Dr. Hastie responded that yelloweye, bocaccio, and canary are so unproductive, there is little benefit in a fixed or staged constant harvest strategy. For canary and bocaccio, the difference in the outlook from the last assessment and that of the recent assessment was the assumed performance of recent year classes. Not only were those past assumptions overly optimistic, the recruitment profile was so much more pessimistic (in hindsight using the new assessments), that the conclusion is these stocks are less productive than originally thought. Given the low stock productivity, it might take a decade or more to see any appreciable increase in spawning stock biomass. Therefore, a constant harvest rebuilding strategy is riskier than a constant harvest rate strategy.

The darkblotched harvest range was deliberated. Was the Council interim rebuilding probability trajectory used? Dr. Hastie stated the medium harvest level was a 2003 projection of the 70% probability trajectory and consistent with the interim rebuilding specifications adopted by the Council last year. There was some discussion about probability of achieving B_{MSY} by T_{MAX} or T_{TARGET} . Rebuilding probabilities (the probability of achieving B_{MSY} within the legally allowable time) are always expressed relative to T_{MAX} , not T_{TARGET} . The median year when spawning biomass is projected to reach B_{MSY} under each rebuilding probability trajectory is often confused with T_{TARGET} . This is not to be construed as the target year for rebuilding the stock to B_{MSY} (T_{TARGET}). T_{TARGET} is a legal construct/policy choice falling within the Council/NMFS decision-making nexus. The choice of T_{TARGET} is constrained to fall between T_{MIN} and T_{MAX} . If it were assumed the median year of achieving B_{MSY} under any rebuilding probability trajectory was the Council's choice for T_{TARGET} , the probability

of achieving B_{MSY} by the T_{TARGET} year is 50% (= median) and less than the probability of achieving B_{MSY} by T_{MAX} (unless $T_{TARGET} = T_{MAX}$). The probability of achieving B_{MSY} within T_{TARGET} (P_{TARGET}) can be increased from 50% by lowering the harvest rate (F) and constraining fisheries further.

Dr. McIsaac asked how the bocaccio ABC could increase from 122 mt this year to 198 mt next year while there is an 85% decrease in the total catch OY? The ABC increased because the ratio of current estimated biomass ($B_{CURRENT}$) to estimated unfished biomass (B_0) increased. However, recruitment was shown to be much poorer than that assumed from the last assessment and would therefore require less catch to stay on the same rebuilding trajectory. The new analysis draws upon lower recruitments to predict future recruitment resulting in more pessimistic projections and a lower OY. In essence, the assumed stock productivity is much less than assumed in the last assessment. The Committee wanted to know whether the model inputs changed? Dr. Hastie replied there were more abundance indices used in the new assessment. The stock synthesis model had to be adapted to accommodate the increased inputs. In questioning whether a thorough review of the assessment occurred, the Committee was apprized of the STAR Panel process that occurred in April and was referred to the bocaccio STAR Panel report for details. Mr. Boydston asked if the Council were bound by these OY constraints? Mr. Robinson said the Council was bound by the best available science. The addition of the Monterey area to the assessment was also considered as an influencing factor. The Committee was assured that the SSC would review the assessment and rebuilding analysis at the June Council meeting.

Mr. Anderson mentioned the Council was facing the same situation in the north with yelloweye and canary as was being faced in the south with bocaccio. Yelloweye and canary rebuilding could constrain salmon, halibut, and other non-groundfish fisheries on the north shelf. Using canary rebuilding as an example, Dr. McIsaac asked if abundance decreases, wouldn't the bycatch also decrease? Dr. Hastie mentioned this has occurred in past cases. However, in this case, the new assessment did not indicate a dramatic change in abundance. Recruitment and potential stock productivity assumptions are now more pessimistic. Mr. Robinson said the new assessment suggests less surplus production, not necessarily a less abundant stock. Therefore, the bycatch rate (coincident catch rate) might not change. Dr. Hastie observed that the abundance decreased dramatically since the late 80s/early 90s. Bycatch rates should now be lower than those years. Canary biomass trajectories are flat.

2. Accounting for all sources of fishing-related mortality

Sources of uncertainty in accounting for all sources of mortality include research catches and bycatch in non-groundfish fisheries. The GMT reviewed the issue of catch accountability in research fisheries and is close to finalizing a statement. The Northwest Region summarized 2001 research fishery catches. There is a concern that all catches are not fully accounted at the species level. Anecdotal evidence from the IPHC Halibut Longline Survey suggest a yelloweye bycatch of about 1 mt last year. Research catches alone, particularly in a year when there are halibut and shelf trawl surveys, could take the entire yelloweye OY. We need to account for this before setting harvest levels.

Bycatch in non-groundfish fisheries could also threaten to take all the most constraining species' OYs. For bocaccio, these fisheries include squid, prawn, and California halibut fisheries. California gillnet, California halibut and other fisheries may have a bycatch of bocaccio and yelloweye. The GMT recommends, for species that are not overfished, to continue to subtract expected research catches from the ABC. However, for overfished species, expected research harvest should be subtracted from the OY.

Mr. Anderson asked when the halibut survey is done and whether one is scheduled for this year? The answer was July and August every year including this year. Mr. Strickland expressed concern with bocaccio bycatch. Why would the fishery persist if there is a bycatch problem? Many of these fisheries are outside of Council control. Some, like the shrimp fishery, are state managed. The Council and states tend to coordinate and cooperate; however, the regulatory framework occurs at the state level. Other fisheries outside of Council control with a bocaccio bycatch include the prawn, shrimp, and California Halibut fisheries. Ms. Garrison asked if the GMT will recommend what to do about bycatch in non-groundfish fisheries? The Council can allocate groundfish to these fisheries. Dr. Hastie explained that, while the Council can allocate groundfish, they cannot dictate management measures to the states. The GMT will attempt to identify which fisheries are a problem, but lack of observer data in these fisheries makes that difficult. In many cases, groundfish may

not be a desirable bycatch. If those catches become market discards, then an analysis of fish tickets will not provide accountability. There is also the problem with species identification. Yelloweye sorting requirements were mandated for the first time last year. Therefore, fish tickets will not be informative for that species. Ms. Garrison mentioned the first year and a half of California observer data from the California prawn fishery will be available in June. Dr. Hastie thanked her for the heads up and said he would look at the data.

Ms. Garrison asked why there are minor shelf rockfish OYs given rebuilding species' constraints? Dr. Hastie explained these are potential harvest levels that are not attained due to bycatch constraints. The GMT will explain how we can manage these species within the constraints imposed by rebuilding. The question was raised whether adopting this range of OYs would prompt a change in 2002 specifications? Mr. Robinson said they were only contemplating changes for 2003.

D. Specifications and Management Options for 2003

1. Is the Mixed Stock Exception a viable alternative for 2003?

Mr. Robinson addressed this question. He said it is an option available in the Magnuson-Stevens Act. He needs to contact headquarters and have the agency explore this option. Critical questions include which species the mixed stock exception (MSE) would be applied?; would that include bocaccio, bocaccio and yelloweye, or bocaccio, yelloweye, and canary?; what would be the specified OYs? There would have to be a comprehensive biological and economic analysis. Economic benefits need to be analyzed relative to the risk to the stock. Is the stock in strong decline? How low would stock biomass be predicted to go? The Council would need a specific MSE proposal analyzed along with an alternative analyzed without the MSE.

Mr. Anderson questioned the relief we'd get with MSE. He stated the stock biomass can't be driven below the minimum stock size threshold (MSST). Average landings of yelloweye in Washington in the last ten years has been 175 mt. The rebuilding analysis predicts an equilibrium yield at $B_{40\%}$ of only about 12 mt. Therefore, rebuilding yelloweye doesn't help recover the overall fishery level.

Dr. McIsaac asked if the MSE is a viable option for NMFS approval in 2003 if all requisite analyses are done and the Council pulls the trigger? Mr. Robinson said it is viable if the analysis is satisfactory. Ms. Cooney said this would trigger an automatic law suit. NMFS would need to discuss the ramifications of the MSE for 2003 management. Mr. Boydston stated he would like to see an MSE alternative analyzed. Ms. Cooney said there would have to be non-MSE alternatives analyzed as well.

Mr. Anderson asked if a harvest level below MSST can be selected? Mr. Boydston asked what standards are applied for crafting an MSE alternative? Dr. McIsaac asked for clarification of MSST- an ESA threshold? - $B_{25\%}$? Mr. Robinson explained all the candidate stocks are below the MSST. The MSE infers rebuilding would be extended beyond T_{MAX} . Dr. Hastie thought the MSE analysis could move forward by delineating other thresholds such as different F rates, etc. These choices require added analyses both in the annual specifications EA and rebuilding plans. However, everyone is working at or above capacity and therefore represents a time/workload issue as well. The GMT would need specification from the Council and/or SSC on a MSE alternative to do the analysis. Mr. Bohn mentioned these are the kinds of issues that might get you through one year, but, to be effective, the MSE would have to be in place for much longer and is therefore a problematic route. Mr. Robinson did not advise using the MSE to limp along from one year to the next. He advised making the hard choices to modify fisheries instead.

Dr. Hastie elected to address D.2-D.4 together.

2. Effort shifts from the shelf in response to rebuilding needs
 - a. Expected consequences for slope rockfish and fisheries
 - b. Expected consequences for nearshore species and fisheries
3. Exploring increased depth stratification in groundfish management
 - a. Incentives (i.e., higher landing limits for longspine?) to fish out of the depth range of overfished species

- b. Verification of fishing location
 - i. Can a VMS system be implemented for 2003?
 - ii. Mandatory observer coverage for certain types of trips
- c. Enforcement concerns

4. Other Management Alternatives

Dr. Hastie referred to the coastal map graphic he provided (attached). Using trip limit management on the shelf for bottom trawl fisheries is probably not feasible. There could be some consideration for limited midwater trawl opportunity targeting widow and yellowtail, as well as a whiting fishery. At-sea whiting observer results indicate no yelloweye bycatch. However, the shoreside whiting fishery took 0.33 mt of yelloweye last year. This bycatch occurred in about 10 landings out of 6,000 total. This bycatch might be mitigated for avoidance.

There are slope constraints with some shelf rockfish species. Opportunities could be shaped with depth restrictions although some enforcement concerns have been raised in the past. DTS/petrale opportunities could be shaped without depth restrictions, but with depth restrictions, there could be increased opportunities. Fixed gear sablefish fishing could be done with depth restrictions for line gear. Pot gear would not need depth restrictions since shelf rockfish are not caught in pot gear. There cannot be line gear fisheries on the shelf or anywhere within the depth range of yelloweye. The DTS/petrale trawl fishery would need to move away from the shelf and the depth range of darkblotched.

The GMT addressed the southern catches of darkblotched in 2001 by analyzing logbook data and determined that most of those catches (40 mt total) occurred just south of the 40°10' management line. Therefore, the GMT will review and recommend a new management line further south for slope fisheries to protect darkblotched. The Council could consider larger landing limits for slope rockfish south of a new line, although limits as large as originally adopted for 2002 are not recommended. The new line might be Pt. Arena or a point somewhere south of San Francisco.

Nearshore flatfish and rockfish opportunities cannot be had within the shallow depth range of yelloweye or bocaccio. Juvenile bocaccio and yelloweye show up in shallow waters. Need to consider a depth restriction for nearshore fisheries or a species restriction (focus fisheries on species with shallow ranges). The alternative is no fishing for nearshore rockfish. Can look at depth restrictions for nearshore flatfish as well.

Experimental gears hold promise for fishing opportunities. ODFW is experimenting with trawl nets designed to target flatfish. Initial results using trawls with the headrope cut back and smaller openings indicate increased flatfish catch efficiency with less rockfish bycatch. Could structure EFPs to test these types of gears to target flatfish on the shelf.

What about nearshore sport gear restrictions? There is a noted bocaccio bycatch of juveniles in southern nearshore sport fisheries. There is the potential of changing hook size to avoid juvenile bocaccio. For example, hook size in the slope fixed gear sablefish line fishery is believed responsible for the lack of darkblotched bycatch. Detailed bathymetric charts depicting where bycatch problems occur and fishing opportunities might exist would be useful for the next Council meeting.

Addressing a potential vessel monitoring system (VMS) solution, Mr. Robinson mentioned NMFS has VMS experts that could come to the next (June 3) Allocation Committee meeting. Requiring VMS may run into some procedural problems for 2003 implementation including conflicts with the Paperwork Reduction Act. Mr. Moore mentioned that industry has talked with the Northwest Fisheries Science Center about using research funding to pay for VMS. He thought it could be deployed for 2003 since the system is set up for the albacore fishery.

Mandating observers in order to prosecute fisheries is problematic. There are cost issues, observer availability issues, equity issues, etc. Ms. Cooney asked if the GMT had a specific proposal? Dr. Hastie stated no, but without depth restrictions, we cannot prosecute fisheries and stay within rebuilding OYs. Current resources won't cover mandatory observer coverage.

Anticipated effort shifts from the shelf to slope and nearshore areas is a big problem. Fisheries in these areas are already over capacity and effort shifts would exacerbate the problem. Shifts to nearshore fisheries would be greatest. The Council would need to reduce OYs for minor nearshore rockfish. For some species, such as black rockfish in the north, OYs would have to be dramatically reduced since their range overlaps with yelloweye. Mr. Robinson asked if there were many unassessed nearshore species that we are concerned about? Dr. Hastie said none of the nearshore species have been assessed except black rockfish where problems in the assessment forced it being pulled back. Nearshore rockfish ABCs are based on average catches. Many species in the nearshore catch data cannot be specified. Therefore, need to reduce the OYs of the entire complex. Mr. Boydston agreed with the recommendation of further depth partitioning of minor nearshore rockfish into a shallow water group and those within the range of constraining species. This process should start in June and management measures crafted accordingly. Other nearshore species may need additional protection. The Allocation Committee should take this up on June 3. Mr. Saelens thought it important to also consider the canary OY and depth range.

Washington has addressed some of the non-groundfish bycatch issues in their shrimp and prawn fisheries. For instance, starting in 2003, prawn fisheries can only use pot gear to avoid shelf rockfish bycatch. Other states should consider this option. The WA halibut fishery has been managed for a 3 mt yelloweye bycatch. Given the low OY, this will need attention. Closed areas to protect yelloweye won't be enough to preserve the sport halibut fishery. Fixed gear halibut fisheries north of Pt. Chehalis are also a problem. Any bottom trawling on the shelf can't be considered. There may be some shelf opportunities with EFPs. There should be federal observers available with many fisheries closing. Could consider some arrowtooth and midwater trawl opportunities. Mr. Anderson wanted to look at VMS and other strategies for increased depth stratification. These are huge challenges with major economic impacts. Mr. Anderson suggested adding another day to the June 3 meeting. Mr. Robinson agreed and urged that management measures need to be defensible. Need to look at permanent gear modifications and use EFPs in 2003.

Public comment was solicited.

Mr. Moore stated all sectors of the groundfish fishery would be affected. Everyone will have to work cooperatively. As GAP chair, he will not tolerate people playing the blame game. Mr. Robinson said the Allocation Committee will need to discuss the recreational fishery. The state representatives need to bring recreational management options to the next Allocation Committee meeting.

Ms. Garrison said Congress needs to consider a "Farm Bill" for fishermen.

Mr. Peterson asked if the alternative harvest levels were developed using Dr. Punt's rebuilding program? Dr. Hastie replied they were. Mr. Peterson asked if new rebuilding analyses were done consistently? Dr. Hastie said yes. Were new survey indices added? Dr. Hastie said no- that would require a new assessment.

Mr. Glock asked if the shelf is closed, what is done with sablefish? Would the entire OY move to the slope? Dr. Hastie replied the GMT would need to work with Dr. Schirripa, the assessment author. He thought sablefish movements were extensive enough that the OY could be shifted to the slope. Shifting OYs would only be a problem with sedentary species.

Mr. Fry stated central California sport fishers are feeling pain from the 2002 management specifications with only 4 months of opportunity while trawlers fish for 12 months. The Council needs to stop the bleeding in the sport sector.

Mr. Raftican stated the pain stretches south of Pt. Conception in state-managed fisheries as well. A handful of trawlers can shut down the entire sport fishery.

E. Provide Direction to Council Staff, Groundfish Management Team, Groundfish Advisory Subpanel, and Other Council Entities

Mr. Boydston requested an accountability of commercial and recreational catches by time and area for overfished species. We have RecFIN Wave 1 estimates in hand for 2002. He will direct his staff to estimate Wave 2 using sport sampling data. He would like catch accountability for the last 4-5 years. The Allocation

Committee also needs to understand tradeoffs in different fisheries. Some coastal areas are more dependent on rockfish than others. What non-rockfish opportunities exist where? This is not an assignment, but a proposed agenda item. The Allocation Committee also needs an economic analysis of options. Can we use PFMC staff economists for the June 3 meeting? Dr. McIsaac said it is not possible to do anything of significance by June 3. Mr. Robinson said no economic analysis is needed for the June 3 meeting; this is needed after June 3. Dr. Radtke agreed. We need to know what alternatives are on the table. Mr. Boydston said California will consider specifying pot gear in their prawn fisheries. He recommended the state and Council consider partitioning nearshore rockfish south of Cape Mendocino.

Mr. Saelens said some of the assignments on his list were already covered. ODFW staff is looking at yelloweye bycatch in the shoreside whiting fishery. All Oregon sport sampling data has been transferred to RecFIN. ODFW will also consider pot gear for their prawn fishery.

Mr. Anderson said his list of assignments was covered. WDFW will look at WA catches, recreational halibut observer data, and yelloweye catches from the WA sampling program data. Outreach to WA stakeholders will be a high priority. WDFW will continue to shape management alternatives between June 3 and the June Council meeting.

Dr. McIsaac noted the earlier requests to provide bathymetric charts and catch tables for bocaccio, canary, and yelloweye stratified by time, area, and fishery sectors (including non-groundfish, Council fisheries, state-managed fisheries, and research fisheries). He tasked Mr. DeVore with coordinating this.

Dr. Hastie asked if the catch tables should focus on overfished species? Mr. Boydston said yes but should include other species such as sablefish. Dr. Hastie asked if the analysis could be limited to overfished and targeted species? Mr. Boydston agreed. Dr. Hastie stated these tables can be expanded later. He is concerned with deliverables by June 3. Dr. McIsaac asked if the analysis could be limited to 2000 and more recent years? Mr. Boydston wants the last three years of estimates. He recommended using the canary catch accounting format from the June 2000 Council meeting. Mr. DeVore will email that attachment to Dr. Hastie. Dr. Hastie stated that, although state data has been transferred to RecFIN, it has not been incorporated yet.

Ms. Garrison asked about alternatives such as depth restrictions and no trawling on the shelf. Does it make sense to consider MPAs? Do we have data? Dr. Hastie said the GMT is considering recommending a complete shelf closure. Specifying MPAs would therefore be moot.

G. Topics for the June 3 Allocation Committee meeting

1. Draft agenda?
2. Assignments?

Adding another day to the June 3 meeting was considered. Ms. Cooney said that could be done with a new (revised) meeting notice posted on the web and sent to the groundfish mailing list. Consensus was to add June 4. The Committee members also wanted to start at 10 a.m. on June 3 rather than 8 a.m. These changes were made.

The draft agenda for the next Allocation Committee meeting:
Review catch tables
Management tradeoffs (expand "D" agenda items)
State-managed fishery effects
Economic analysis: a report of what should be analyzed
State-sponsored outreach
Other management alternatives?

ADJOURN 11:35

PFMC
05/21/02

TABLE 2-1. Acceptable biological catch (ABC) and total catch optimum yield (OY) alternatives for 2003 for the Washington, Oregon, and California region (metric tons) under the GMT-proposed alternatives. (Overfished stocks in CAPS).

	Status Quo Alternative 2002 ABCs/OYs		Alternative 1 2003 Low ABCs/OYs		Alternative 2 2003 Medium ABCs/OYs		Alternative 3 2003 High ABCs/OYs	
	ABC	OY	ABC	OY	ABC	OY	ABC	OY
LINGCOD	745	577		555		651		725
Pacific Cod	3,200	3,200			3,200	3,200		
PACIFIC WHITING	166,000	129,600						
Sablefish	4,644	4,367		4,381		7,359		8,091
Conception INPFC area	333	229		233		323		346
PACIFIC OCEAN PERCH	640	350	640	311	640	377	640	496
Shortbelly Rockfish	13,900	13,900			13,900	13,900		
WIDOW ROCKFISH	3,727	856	3,871	656	3,871	832	3,871	916
CANARY ROCKFISH	228	93		>20 ?				<50 ?
Chilipepper Rockfish	2,700	2,000			2,700	2,000		
BOCACCIO	122	100	198	0	198		198	14
Splitnose Rockfish	615	461			615	461		
Yellowtail Rockfish	3,146	3,146			3,146	3,146		
Shortspine Thornyhead	1,004	955			1,004	955		
Longspine Thornyhead	2,461	2,461			2,461	2,461		
S. of Pt. Conception	390	195			390	195		
COWCOD (S. Concep)	5	2.4			5	2.4		
N. Concep & Monterey	19	2.4			19	2.4		
DARKBLOTCHED	187	168		172		184		208
YELLOWEYE - Coastwide	27	13.5						
N of 40°10' latitude	22	11	22	0.400	22	1.033	22	1.460
Monterey	5	2.5	5	0.000	5	0.067	5	0.133
Minor Rockfish North	4,795	3,115			4,795	3,115		
Minor Rockfish South	3,506	2,015			3,506	2,015		
Remaining Rockfish North	2,755				2,755			
Black	1,115				1,115			
Bocaccio	318				318			
Chilipepper - Eureka	32				32			
Redstripe	576				576			
Sharpchin	307				307			
Silvergry	38				38			
Splitnose	242				242			
Yellowmouth	99				99			
Remaining Rockfish South	854				854			
Bank	350				350			
Blackgill	343				343			
Sharpchin	45				45			
Yellowtail	116				116			
Other Rockfish North	2,068				2,068			
South	2,652				2,652			
Dover Sole	8,510	7,440			8,510	7,440		
English Sole	3,100				3,100			
Petrale Sole	2,762				2,762			
Arrowtooth Flounder	5,800				5,800			
Other Flatfish	7,700				7,700			
Other Fish	14,700				14,700			

Major 2003 groundfish management concerns (5-21-02)



