GMT Comments on the Development of Rebuilding Plans and Management Alternatives

In June, the Allocation committee received initial reports on rebuilding timeframes and mortality limits for three species under consideration for rebuilding plans. They also provided guidance to the GMT regarding the types of management alternatives that should be explored in our attempt to develop recommendations for achieving mortality objectives. While the GMT is committed to providing the best possible advice to the Council, we feel it is important to emphasize the tremendous amount of uncertainty that will characterize our attempts. The options are likely to include the possibility of time/area closures. Not only does this management approach fall outside the range of our current groundfish management practices, but the available information is unlikely to provide highly accurate quantifications of the mortality tradeoffs associated with various closure alternatives.

This uncertainty begins with the documentation of current catches, not only of species targeted for rebuilding, but of other species with which they are caught. Within the commercial fishery we are presently able to monitor landings, with little ability to discern the potential magnitude of discards. Within a season, landings of rockfish species can only be monitored to the extent that they are required to be sorted and reported independently on fishtickets. Currently, these species are limited to those for which individual trip limits or OYs are set. Information on the landings of other rockfish species must normally wait until port sampling data on species composition can be assembled and combined with fishticket data. The current level of port sampling is not sufficient to distribute all poundage from generic market categories into sampling for identification of individual rockfish species creates tremendous obstacles for observing whether various species are caught together, identifying the locations of coincident catch, and quantifying how those relationships may vary within a fleet, or among fleets.

Trawl logbook information can provide some useful information on areas of highest trawl catches of lingcod and POP, and some indication of species caught with them. However, bocaccio are not identified n logbooks, nor are most other individual species within the *Sebastes* complex. Comparable information on the locations where other commercial gears tend to intercept any of the "rebuilding" species are not available. Another problem with reliance on identifying areas with high logbook CPUEs relates to our recent history of management. These species have already been placed under management that is designed to discourage targeting. With recent low limits, it is reasonable to expect that most vessels have already shifted away from areas where their catch of these species has traditionally been highest. If recent CPUEs are relied upon as the sole criterion for identifying candidate closure areas, we may inadvertently redirect fishing effort to locations that fishers have already moved away from because of bycatch concerns.

The GMT has begun to review trawl survey data, and evaluate their potential value in identifying areas in which closures might yield mortality benefits. But is important to remember that a primary factor in the determination that these species have been overfished is their lack of abundance in recent trawl surveys. To illustrate, from 1977-89, there were 8 survey hauls with more than 300 kg of bocaccio. From 1992-98, there have been only 8 hauls with more than 10 kg of bocaccio, and only one of those had more than 300 kg. Additionally, the shelf survey has only been conducted every 3 years. It is impossible to know whether specific locations that may have evidenced somewhat higher recent survey catch rates are representative of species distributions in non-survey years. Also, to varying degrees, each of these species can exhibit somewhat mobile behavior, meaning that the location with highest densities of these species may drift from year to year. Finally, successfully trawl survey hauls typically do not occur in very rock habitat. Therefore, the scope of the locations sampled by the trawl survey may be insufficient for identifying key aggregations of bocaccio or lingcod that may be vulnerable to some fishery participants.

While there is an immediate need to reduce fishing mortality imposed on these stocks, it is also not apparent that areas of highest survey or fishery CPUE in recent years correspond to the areas of highest abundance during earlier survey years, when much larger amounts of fish were encountered. Although we may find areas where closures meet short-term, mortality-reduction objectives, we should also keep in mind that these areas may not always coincide with locations that might represent the best habitat alternatives for accelerated stock rebuilding.

Development and analysis of management options for the recreational fisheries for these species are

subject to a similar list of problems. While there is limited information from charter-boat logbooks regarding locations of catch, this information is entirely lacking for the private-boat fleet. Reliable quantification of the degree to which "rebuilding" species are caught in association with other specific species by recreational fishers is also apt to prove extremely difficult within the time available. If recreational fisheries are closed for a portion of the year, it is also not clear to what extent effort that would otherwise have occurred in closed months will be redirected toward months that remain open.

The GMT continues to have serous reservations about relying on the RecFIN database for purposes other than estimating annual removals. Analyses of projected outcomes of alternatives that the GMT frequently develops for the commercial fishery are not reliably supported by the data available from RecFIN. Where PacFIN contains information for every commercial landing of groundfish for which a fishticket is submitted to the appropriate state agency, RecFIN compiles data from creel and phone surveys that directly cover only a small fraction of all recreational angler trips. Data form these surveys are then expanded, with the use of statistical techniques , for the purpose of estimating annual catch summaries at a regional (Southern California, Northern California, Oregon, and Washington) level of aggregation. Since the sampling protocol
was not designed to produce reliable estimates of overall bag distributions, for example, it is likely that the proportions of fish caught in sampled bags of various sized would have very wide confidence intervals when applied to the total coastwide, or regional, recreational trips/poundage. Similar concerns exist for analyzing alternative minimum fish-size limits, or periods in which the fishery might be completely closed.

The RecFIN data systems was also not designed to provide reliable inseason fishery catch information. It is anticipated that considerable effort would be required to establish procedures for reliable use of these data for this purpose. Even if methods can be established for effective inseason monitoring of recreational data, it is not clear what mechanisms the Council would use to alter or suspend recreational catch rates inseason.

Ultimately, there are no guarantees that management measures which would constrain mortality within rebuilding targets will be correctly identified and implemented. There will be a continuing need for review and adjustment of management measures in order to ensure that rebuilding remains on track. this type of adaptive management will be hampered by the fact that recreational catches, particular, for a given year will not be known until well after specifications for the next year's fishery must be set in November. Thus, by the time we can evaluate what effect our actions may have had on recreational catch, our first opportunity to use that information to revise management is likely to be two years removed from the initial action. It is not clear what repercussions, with regard to a continued "overfishing" status, might result from the combined uncertainty of our projections and our inability to know if rebuilding targets are being met until well after the fact.