

**PROPOSED AGENDA**  
**Groundfish Management Team**

Pacific Fishery Management Council  
DoubleTree Hotel - Columbia River  
Tualatin Room  
1401 N Hayden Island Drive  
Portland, OR 97217  
(503) 283-2111  
September 10-13, 2001

MONDAY, SEPTEMBER 10, 2001 - 8 A.M.

**A. Call to Order**

Jim Hastie/Brian Culver, Co-Chairs

Roll Call, Introductions, Announcements, etc.

**C. Groundfish Management**

C.2 Marine Recreational Fisheries Statistics Survey Update

C.3 Preliminary Harvest Levels and Other Specifications for 2002

C.5 Rebuilding Programs

C.6 Exempted Fishing Permits

C.7 Proposed Management Measures for 2002

C.8 Status of Fisheries and Inseason Adjustments

C.9 Amendment 15 to the Groundfish Fishery Management Plan (FMP) - American  
Fisheries Act

Jim Seger

C.10 Groundfish FMP Environmental Impact Statement

C.11 Full Retention Measures

C.12 2002 Stock Assessment Schedule

The GMT will assist the Groundfish Advisory Subpanel and Council throughout the week. The GMT will meet independently only as necessary to prepare supporting material.

ADJOURN

PFMC  
08/22/01

**PROPOSED AGENDA**  
**Budget Committee**

Pacific Fishery Management Council  
DoubleTree Hotel - Columbia River  
1401 N Hayden Island Drive  
Portland, OR 97217  
(503) 283-2111  
September 10, 2001

MONDAY, SEPTEMBER 10, 2001 - 10 A.M.

**A. *Call to Order and Approval of Agenda***

Jim Harp, Chair

**B. *Legislative Update***

Dave Hanson

**C. *Executive Director Report***

Donald McIsaac

1. Meeting Site Selection for 2003
2. Status of Supplemental Funding
3. Status of 2001 Budget
4. Proposed 2002 Grant Submission

**D. *Other***

ADJOURN

PFMC  
08/20/01

**DRAFT SUMMARY MINUTES**  
**Coastal Pelagic Species Advisory Subpanel**  
**Coastal Pelagic Species Management Team**

Pacific Fishery Management Council  
National Marine Fisheries Service  
Southwest Region  
501 W Ocean Blvd., Ste. 4200  
Long Beach, CA 90802  
May 11, 2001

**Members in Attendance**

Coastal Pelagic Species Advisory Subpanel (CPSAS)

Mr. Orlando Amoroso, Purse Seine Owners of San Pedro  
Mr. William Beckett, Huck Finn Sportfishing  
Mr. Joe Cappuccio, Del Mar Seafoods  
Ms. Terry Hoinsky, Fishermen's Union  
Mr. Eugene Law, Oregon fisherman  
Mr. A. Pierre Marchand, Jr., Jessie's Ilwaco Fish Company  
Ms. Heather Munro, Munro Consulting  
Ms Karen Reyna, Pacific Ocean Conservation Network  
Mr. John Royal, Chair  
Mr. Paul Strasser, MCIP Sportfishing

Coastal Pelagic Species Management Team (CPSMT)

Mr. Brian Culver, Washington Department of Fish and Wildlife  
Dr. Sam Herrick, National Marine Fisheries Service  
Dr. Kevin Hill, California Department of Fish and Game; Chair  
Ms. Marci Yaremko, CDFG  
Dr. Paul E. Smith, National Marine Fisheries Service

**Others in Attendance**

Mr. Darrin Bergen, California Department of Fish and Game  
Mr. Christopher Fanning, National Marine Fisheries Service  
Ms. Leanne Laughlin, California Department of Fish and Game  
Mr. Jim Morgan, National Marine Fisheries Service  
Mr. Dan Waldeck, Pacific Fishery Management Council  
Mr. Stephen Wertz, California Department of Fish and Game

**Meeting Summary**

Dr. Hill called the meeting to order. Mr. Waldeck opened with introductory comments and summarized the purpose and goals of the meeting.

Dr. Hill presented the 2001 assessment of Pacific mackerel biomass. Dr. Hill noted several items indicative of a downward trend in abundance: decreased landings of Pacific mackerel in the Mexican fishery, fewer age 2 fish in catch-at-age data (weak 1998 year class), and increasing mean weight-at-age. He noted that more baseline data would strengthen the assessment, e.g., recruitment data, and catch-at-age and weight-at-age data from the Mexican fishery.

Per the fishery management plan (FMP) control rule for Pacific mackerel and based on a biomass estimate of 84,090 mt, the recommended harvest guideline is 13,837 mt. This harvest guideline is 33% lower than the 2000-2001 season, but similar to the average yield realized by the fishery since the 1992-1993 season (14,053 mt). Dr. Hill noted the confidence interval on the biomass estimate is approximately +/- 40%.

Both committees discussed ways to acquire more data, it was reinforced that Mexican data and recruitment information would help greatly. It was also noted that more funding for basic research on coastal pelagic species (CPS) stocks is needed. The committees briefly discussed the need for a formal stock assessment review (STAR) panel for the CPS stock assessments. There will be a STAR process in 2002.

Some on the Subpanel noted that Pacific mackerel appeared abundant and available to the fishery. While they do not question the assessment methods, many on the Advisory Subpanel questioned the results of the assessment because of the lack of scientific data and inherent uncertainty. It was stressed that it should be recognized that CPS stocks are volatile, and that fluctuations in abundance are to be expected.

The Subpanel and Management Team next discussed how to conduct the 2001-2002 fishery, and developed recommendations for directed harvest, indirect harvest, and a "mop-up" fishery.

Dr. Hill started the discussion by describing several possible approaches: (1) use all of the HG for a directed fishery; (2) allot a large amount for an initial directed fishery, after amount taken switch to incidental allowance; (3) allot a smaller amount for an initial fishery, switch to an indirect allowance after directed amount taken, and open "mop-up" fishery toward the end of season if adequate HG remains; (4) no directed fishery, HG used as incidental allowance for indirect harvest, possibly season end mop-up fishery.

Mr. Wertz (California Department of Fish and Game) reviewed for the committees landings data from 1996-2000 for the Pacific mackerel fishery. The data indicates that the directed Pacific mackerel fishery is generally timed opposite of the Pacific sardine fishery; May to October, and January to May and August to December, respectively. California Department of Fish and Game (CDFG) port sampling data also shows a similar trend.

The Subpanel discussed at length how to use the HG, notably how much should be allotted for the directed fishery and what percentage of incidental harvest would be considered for the indirect fishery.

The CPSAS voted (unanimously) to recommend an initial directed fishery of 6000 mt; after the 6000 mt is harvested, switch to an incidental allowance of 45% and/or 1 mt pure load; the fishery will be reevaluated in March and April to determine if enough HG remains for a directed mop-up fishery.

The CPSMT concurred with the Subpanel recommendation.

A motion was made for the CPSAS to re-state to the Council their desire for a review of the Pacific sardine reallocation process specified in the FMP. That is, to recommend changing the date for reallocation from nine months after the start of the Pacific sardine season to seven months after the start of the season.

After discussion, the motion was withdrawn. Ms. Munro stated she would prepare a background document about the reallocation issue for the CPSAS to consider.

The CPSAS briefly discussed the issue of making market squid an actively managed species under the CPS FMP. It was decided that issue needed more time for discussion, the issue will be included on the agenda of the next CPSAS meeting.

**Public Comment:** There was no formal public comment. Comments from the public in attendance was taken on an informal basis throughout the meeting and contributed to the development of the recommended plan for conducting the Pacific mackerel fishery.

**Adjournment:** The joint meeting adjourned at 5:30 P.M., Friday, May 11, 2001.

PFMC  
08/02/01

**PROPOSED AGENDA**  
**Coastal Pelagic Species Advisory Subpanel**

Pacific Fishery Management Council  
DoubleTree Hotel - Columbia River  
Yakima Room  
1401 N Hayden Island Drive  
Portland, OR 97217  
(503) 283-2111  
September 12, 2001

WEDNESDAY, SEPTEMBER 12, 2001 - 10 A.M.

**A. Coastal Pelagic Species Advisory Subpanel (CPSAS) Administrative Matters**

John Royal

1. Call to Order
2. Introductions
3. Review/Approve Agenda
4. Review/Approve May 2001 Minutes

**H. Coastal Pelagic Species (CPS) Management**

2. Final Report on Squid Maximum Sustainable Yield Methodology Workshop
3. Pacific Sardine Fishery Update

Kevin Hill  
Kevin Hill

**A. CPSAS Matters (continued)**

5. Draft Amendment 10 to the CPS Fishery Management Plan
6. Pacific Sardine Allocation
7. Other Business and Schedule
8. Reports to Council

Kevin Hill  
Heather Munro  
Dan Waldeck

ADJOURN

PFMC  
08/24/01

## **DRAFT SUMMARY MINUTES** **Coastal Pelagic Species Management Team**

Pacific Fishery Management Council  
National Marine Fisheries Service  
Southwest Fisheries Science Center  
Large Conference Room  
8604 La Jolla Shores  
La Jolla, California 92038-0271

August 14-15, 2001

### **Members in Attendance**

Dr. Paul Crone, National Marine Fisheries Service (NMFS)  
Mr. Brian Culver, Washington Department of Fish and Wildlife  
Dr. Sam Herrick, NMFS  
Dr. Kevin Hill, California Department of Fish and Game (CDFG), chair  
Ms. Jean McCrae, Oregon Department of Fish and Wildlife  
Dr. Paul Smith, NMFS  
Ms. Marci Yaremko, CDFG, vice-chair

### **Others in Attendance**

Ms. Annette Henry, CDFG  
Dr. John Hunter, NMFS  
Mr. Rick Klingbeil, CDFG  
Mr. Jim Morgan, NMFS  
Mr. Dan Waldeck, Pacific Fishery Management Council  
Dr. Michael Maxwell, University of California, San Diego  
Mr. Stephen Wertz, CDFG

### **Meeting Summary**

Dr. Hill called the meeting to order and reviewed the scope, purpose, and goals. The agenda was approved.

#### Market Squid Assessment Methodology

Dr. Crone led the CPSMT through the market squid maximum sustainable yield (MSY) workshop information.

He noted the workshop Panel focused most of their attention on working papers 1, 7, and 8. Working paper 9 (WP-9), provided to the CPSMT following the workshop, is a summary synthesis of working papers 7 and 8 (and was produced by Dr. Maxwell). The Panel reviewed methods presented by the squid Stock Assessment Team (STAT), selected a candidate method for management purposes (i.e., the egg escapement (EE) approach), and finally, assisted in refining the preferred analytical approach. The Panel left determination of specific model configurations and other management-related parameters to the CPSMT. The goals of the CPSMT meeting are to: (1) develop consensus regarding important issues/points concluded in the Panel's Report; (2) determine if the suite of model configurations based on the EE approach could be further reduced into a tractable subset; (3) further evaluate important parameters of the EE approach (e.g., population 'threshold' levels) in efforts to establish maximum sustainable yield (MSY)-based management schemes; and (4) develop sampling/laboratory/analysis schedules that support the EE approach in particular, but also discuss the merits of gathering auxiliary data that would improve our understanding of squid population dynamics. Finally, general issues surrounding Pacific sardine capacity goals and permit transferability need further attention and will be addressed following squid-related discussion.

The Panel settled on the egg escapement (EE) approach and spent considerable time working on this approach.

Dr. Crone emphasized that the Panel left determination of the "preferred" model to the management team.

Dr. Maxwell reviewed WP-9. He noted specific areas where the CPSMT would need to select an appropriate value (natural mortality, egg laying, EE threshold). He reviewed the modeling approach and modeling assumptions to the egg escapement approach.

#### Model 1

- a. assumes all squid mature synchronously (i.e., recruit to fishery at same time) and the whole cohort declines over time. There is an exponential decline of the mature population.
- b. egg laying also declines exponentially, eggs are shed over a continuous process.

Under this scenario, standing stock of eggs (potential fecundity) is static at maturation, i.e., there is fixed fecundity. Critical parameters are natural mortality (M) and egg laying (v). As noted, the CPSMT will need to determine the appropriate values for these parameters.

Most females in port sampled catch show signs of having laid eggs.

Estimates of the standing stock of eggs per female (SSPF) are based on evaluations of the ovary contents of females in the catch – (SSPF can also be estimated using regression methods based on meristic data, such as mantle condition and gonad weight). Generally speaking, the estimate of SSPF can be compared with the standing stock of eggs per virgin female (i.e., estimated "potential" fecundity that is equivalent to the number of eggs laid before capture by fishery) to determine the fraction of the potential fecundity remaining at capture. Subsequently, an EE value can be derived, which can be practically interpreted as a measure of the spawning potential realized by the stock at any point in time. The SSPF estimates are derived from port samples. Port samples from the late 1990s to the present indicate that an average female squid caught by the fishery has roughly 65% of her potential fecundity at capture and thus, has released approximately 35% of her total available eggs prior to capture. It is believed that roughly one day of spawning occurs prior to capture by the fishery. However, the proportion of pre-spawned females and partially-spawn females in catch is a critical factor and should be closely monitored.

Model 1 assumes the squid population is highly productive, i.e., able to increase abundance levels rapidly. However, potential fecundity of an individual female does not appear to be very high, relatively speaking, i.e., potential fecundity was estimated to be approximately 3,800 eggs per mature (pre-spawn) female.

Model 2 is very similar to Model 1. The main difference is that maturation is not synchronous. Approximately 1% of females recruit each day, which results in staged egg laying.

There are unresolved questions in the egg escapement approach. Estimates of maturation rate, duration of spawning, egg-laying rates, and natural mortality (M) need further research.

The EE approach is used to evaluate the effects of fishing mortality (F) on the spawning potential of the stock and in particular, to determine a proxy for the fishing mortality that results in maximum sustainable yields (MSY) to the fishery, or  $F_{MSY}$ . However, it is important to note that this approach does not provide estimates of historical or current total biomass and thus, a definitive yield (i.e., quota or Acceptable Biological Catch) cannot be determined at this time. Ultimately, the EE approach can be used to assess whether the fleet is fishing above or below sustainable levels of exploitation and in this context, can be used as an effective management tool.

*The CPSMT considered whether they supported the recommendations of the STAR panel; notably, use of the egg escapement approach as an MSY-based method for managing the fishery.*

Generally, the CPSMT supports the Panel's findings. Until more fishery data are collected, for the short term, there will not be a better alternative. CPSMT prefers egg escapement model version 1, and noted available data support this approach.

The CPSMT noted, as did the STAR Panel, that equilibrium yields on an annual basis (i.e.,  $MSY$ ) are likely not applicable to highly productive, short-lived populations, such as squid, which are typically influenced strongly by environmental conditions and can increase (and decrease) rapidly over very short periods of time.

Next, the CPSMT considered values for  $M$  and  $v$ . It was noted that the  $M$  value should fit the context of SSPF, EPR, and EE (WP9, figure 1). A potential problem with the approach could be the flat curve in figure 1 based on ( $M = 0.45$ ,  $v = 0.225$ ). The flat curve produces a wide range of fishing mortality ( $F$ ) values, which complicates selection of appropriate  $F$  value.

Estimation of  $M$  was discussed. Port samples show maturity at 4 - 10 months, with full maturity at 5 - 8 months, bulk of fishery catch is 5.5 - 7.5 months.

Information about squid biology indicate females do not live beyond one month after reaching maturation, and may live only up to 14 days. As a starting point, the CPSMT discussed a range of  $M$  from 0.08 to 0.1. However, because there are few mature females in catch that show signs of long life post-maturation (e.g., reduced mantle thickness), the catch data would indicate that natural mortality is higher than 0.1, possibly as high as 0.45. The data also indicate  $M$  could be higher than agreed upon values in the literature.

CPSMT asked Dr. Maxwell to do a model run (using model version 1) with a higher  $M$  (0.08 - 0.45) and lower  $v$  (at least 0.225).

After review of this information, the CPSMT concluded that daily  $M$  for adult squid = 0.15 and daily  $v = 0.45$  would be appropriate.

Moreover, the CPSMT recommends these estimated parameters be reviewed in three years to verify they are the best values. Additional data from the fishery would be used to verify that current data is not biased. CPSMT agrees with the methods and egg escapement approach, but verifying data would help.

It was noted fishery independent data would also be useful to verify that fishery does not select for a specific type of individual, i.e., to verify that catch is representative of the larger population of squid.

The CPSMT recommends squid assessment methods be added to CPS STAR schedule – squid methods review in 2004.

Next, the CPSMT considered the egg escapement threshold. The use of this approach will require monitoring and sampling of fishery landings. It could also require mechanism for ratcheting down fishing effort if threshold breached.

The CPSMT briefly discussed whether it would be prudent to set two threshold values, one for normal (non-EI Nino) years and one for the year following an EI Nino event. Also discussed need for triggers to compel effort controls.

A threshold of 40% was used as a starting point during the discussion, given this value is currently used in the Falkland Island's squid fishery. The fishing mortality ( $F$ ) that is related to an EE threshold of 40% (i.e.,  $F_{40\%}$ ) can be practically interpreted as the amount of fishing pressure that reduces spawning potential (in this case, eggs) per recruit to 40% of the "unfished" condition. The theoretical underpinnings of the EE approach provide a basis for treating this fishery statistic,  $F_{40\%}$ , as a proxy for  $F_{MSY}$ .

A precautionary adjustment for a threshold of 40% was suggested, given potential fecundity per mature (pre-spawn) female (ca. 3,800 eggs per female) could constrain productivity. However, given the demonstrated ability of this stock to recover from fishing pressure and EI Nino events, 40% is likely a precautionary threshold value. It was noted that squid appear very resilient to recruitment overfishing, recruitment failure has not been



witnessed, even following El Nino events. This resilience is dis-similar to other pelagic species (e.g., anchovy, hake). Thus, it is plausible that F could be set relative to historic landings (e.g., 150,000 mt).

It was stressed that a primary "warning flag" for management should focus on the proportion of immature squid in the fishery catch, as this is the critical factor to ensure appropriateness of the EE approach. It was also noted that market value of squid is higher for thick mantled squid, i.e., mantle thickness decreases over the spawning period. Thus, if the fishery begins to target pre-spawn squid, the egg escapement approach would need to be revisited in a timely manner.

The CPSMT discussed the prudence of recommending a cap on landings as a buffer against overfishing.

It was suggested that a threshold of 0.4 (40%) is an appropriate value for a highly productive stock, in a fishery (currently) incapable of targeting pre-spawned, mature females. If assumption that fishery targets post-spawned squid is valid, it is safe to assume fishery has minimal impact on productivity.

Other factors that help to maintain standing stock of squid (e.g., areas where fishing does not occur, landing caps, spatial and temporal closures, weather) were discussed.

It was noted that multiple thresholds could be implemented, e.g., thresholds that signal "warning" versus "overfishing" levels of egg escapement.

In their report to the Council CPSMT will state the assumptions behind the recommended management approach – notably that this is a new method (new science, new management), which should be evaluated to verify it is the most appropriate method.

Response mechanisms for ratcheting down fishing effort in response to threshold value were discussed. Port samples will be collected to provide data to monitor fishery: mantle length, mantle thickness, and ovary weight. Changes in these parameters would be indicative of status relative to threshold, and could impel adjustments to fishing pressure. Gear impacts on egg masses also should be tracked as egg survival is key to management approach.

*The CPSMT recommends the following framework for monitoring the fishery:*

- a. *Set threshold in FMP, recommend CDFG institute landings cap and other management controls (e.g., depth restrictions to minimize gear impacts on egg masses, could be accomplished by establishing minimum light boat depth restriction);*
- b. *Collect port samples of catch – CDFG port sampling program;*
- c. *Work up samples for mantle length, mantle thickness, and ovary weight – CDFG/NMFS;*
- d. *Analyze data to evaluate fishery relative to threshold (mid-summer/mid-winter or early-season, mid-season, late-season) – STAT (Maxwell);*
- e. *CPSMT monitors fishery, provides annual (or periodic) report in CPS SAFE, reports to Council – report will include proportion of immature squid in catch;*
- f. *As necessary, Council recommends management changes.*

NOTE – While fishery takes a small amount of juvenile squid, this needs to be monitored closely, as success of approach is tied to assumption that fishery targets mature, spawning squid and that eggs escape fishery effects (i.e., the average female in the catch was able to release roughly 35% of her eggs prior to being harvested). The stock's response to current levels of fishing pressure could be seriously compromised if the fishery were to begin harvesting immature squid.

Next, the CPSMT discussed other data necessary for improving our understanding of squid population dynamics: fishery independent information/data useful for management: light boat/catcher boat logbooks, archived squid samples, surveys of para-larvae production, and remotely-operated-vehicle (ROV) surveys.

The STAR Panel, in their report, also recommended:

The most important areas requiring additional work include questions about reproductive biology (a key area of uncertainty) that include potential fecundity of newly mature virgin females, duration of

spawning, egg output per spawning bout, temporal pattern of spawning bouts, growth of relatively large immature squid, and growth of mature market squid. Important questions about growth and might could be addressed through SEM studies of statoliths.

The California Cooperative Fishery Investigation (CalCOFI) ichthyoplankton collections contain approximately 20 years of unsorted market squid data that span at least two major El Ninos. This untapped resource might be useful in addressing questions about population response to El Nino conditions.

It was also noted that the EE approach is a method for determining how fishing mortality affects the spawning potential of the stock, but does not provide estimates of current levels of biomass or recruitment success.

Reasons for recommending a lower threshold:

- EE threshold is based on fishery data, it is a measure of the status of the fished portion of the stock, thus, other portions of the stock are free of fishing pressure;
- There are established closed areas and weekend closures also provide protection from fishing pressure;
- Severe weather reduces fishing pressure;
- As an additional measure of precaution, Council could encourage CDFG to establish a landings cap.

*For these reasons, the CPSMT recommends a threshold of 0.30. It will be essential for CDFG (as active manager of fishery) to institute fishery controls that could be adjusted relative to the threshold.*

The CPS SAFE will include threshold monitoring report (with proportion immature squid in catch). The CPS STAR will evaluate EE methodology and data in 2004.

The CPSMT briefly discussed whether to recommend a different threshold for years following El Nino events. Fishery data indicate rapid recovery of squid following El Nino events. Presence of squid beaks in marine mammal scat also indicates recovery after El Nino events. Further, squid availability during these events was observed to decline markedly and in effect, translated to substantial reductions in fishing effort directed towards squid as well, i.e., for economic reasons, the squid fleet shifted its effort to other species. For these reasons, the CPSMT felt that more stringent management measures during (or immediately following) El Nino events are not warranted at this time, but strongly recommends that fishing success be closely monitored when this oceanographic phenomenon occurs in the future.

Important triggers for ratcheting down fishing effort include:

- new fishing techniques developed that allow targeting on pre-spawned squid,
- change in proportion of immature squid in catch,
- and falling below threshold two years in a row (similar to overfishing threshold).

In summary, based on review of STAR and WP-9, the CPSMT put forward –

- Preferred approach – egg escapement approach;
- Refined management model;
- “Preferred” model, i.e, assisted in determining “best” estimates for natural mortality (M), egg-laying parameter (v), and EE threshold;
- Rationale for each of the above values;
- Recommendations for CDFG management controls (including encouraging CDFG to institute landings cap);

- Process for monitoring threshold, annual (or periodic) report in SAFE, review of proportion immature in fishery catch;
- Recommendations for adding review of squid stock assessment methods to CPS STAR (2004).

M and v values were selected based on review of WP-9 and other research. Threshold value based on that used in Falkland Island's fishery, adjusted to reflect the nature of the market squid fishery and demonstrated resilience of stock.

The recommendation for a landings cap will include recommendation for periodic review of the cap, the CPSMT will work with CDFG in monitoring and evaluating cap.

MSY alternatives in Amendment 10 will include the landings and area based approaches from previous analysis, new alternatives will include a surplus productions model (as discussed in STAR Report and WP-9) and the egg escapement approach. Egg escapement will be recommended as the preferred alternative.

The CPSMT presentation in September 2001 will focus on the review of the STAR Panel recommendations and refinement of the management approach.

Management recommendations will be presented in full as part of Amendment 10, which will be presented in draft to the Council in November 2001.

#### Pacific Sardine Fishery

September 2001 report will include review of fisheries by each state management agency. The CPSMT will speak to preemption concern and advise the Council recommend to NMFS that the reallocation schedule as specified in the FMP be executed. This is largely for socio-economic reasons, to ensure the harvest guideline is achieved and the Monterey, California fishery is provided opportunity to harvest a reasonable share of the harvest guideline.

#### Amendment 10

Reviewed and agreed to outline for Amendment 10. Dr. Hill will coordinate development of the document and act as overall editor. Waldeck and Hill will draft Introduction (Section 1). Drs. Herrick and Hill will draft sections relevant to fleet capacity and limited entry permit transferability (Sections 2 and 4). Drs. Smith and Crone will draft sections relevant to market squid (Sections 2 and 4). Dr. Smith will review and update Section 3. Waldeck and Hill will draft section relevant to other applicable laws (Section 5). Dr. Herrick will be lead on social impact analysis and regulatory impact review (Section 6).

The CPSMT reviewed summary of alternatives for fleet capacity and permit transferability in the CPS limited entry fishery. Preferred alternatives for fleet capacity goal and permit transferability have been selected by the Council. The CPSMT discussed alternatives for maintaining fleet capacity and issuance of new permits.

*For maintaining fleet capacity (subissue 2.a), the CPSMT recommends Alternative 3: restore fleet capacity to target GRT (5,642 mt) by restricting conditions for permit transfer when the upper threshold of fleet GRT (fleet GRT plus 5%, or 5,924 mt) is reached. Under Alternative 3, once the trigger point is met or exceeded, permits could only be transferred to vessels with a smaller GRT (e.g., 80% or 90% of permitted vessel GRT). Direct, or 1 for 1, transfer of permits including the 10% allowance, could be resumed once the fleet GRT is reduced to 5,642 target (capacity goal).*

*For issuing new permits (subissue 2.b), the CPSMT recommends Alternative 1: allow for issuance of new permits consistent with the parameters of a framework that will be developed in the future. New permits may be necessary in the future to address significant changes in market conditions, resource availability, or CPS fleet activity. If such conditions were to occur, industry could raise a point-of-concern under the FMP's socio-economic framework. The Council could direct the CPSMT to reassess the capacity goal, estimate latent capacity in the fleet, evaluate market conditions and resource availability, and make recommendations as to the number of new permits to issue.*

The framework could also include provisions for differential constraints on the new permits (e.g., provisional-temporary permits; transferability restrictions).

#### Schedule

Sardine fishery information and squid MSY proxy brief will be provided to Dr. Hill by September 7, 2001. This information will be submitted as supplemental CPSMT reports at the September Council meeting.

Meetings of the CPSMT (8 a.m. to 12 p.m.) and CPSAS (1 p.m. to 5 p.m) will be held October 10, 2001 at CDFG – Los Alamitos, California for review of the 2001 Pacific sardine assessment and 2002 recommended harvest guideline.

A draft of Amendment 10 will be prepared in time for CPS Advisory Subpanel, Scientific and Statistical Committee, and Council review at the October/November 2001 Council meeting. All sections should be to Dr. Hill by October 4, 2001. The draft will be submitted for inclusion in the October/November briefing book, no later than October 11, 2001.

#### **Public Comment**

There was no formal public comment.

#### **Adjournment**

The CPSMT adjourned at 12 P.M., Wednesday, August 15, 2001.

PFMC  
08/22/2001

## Appendix

Dr. Paul Smith's notes on squid MSY proxy:

Why is formal MSY not suggested?

A formal MSY requires a population response to fishing; catch per unit effort (CPUE), age structure, size structure, fecundity. Thus far, squid have shown no identifiable response to fishing pressure, probably owing to its sub-year generation time. After examination of all contemporary target setting methods, the escapement methodology was recommended by the STAR Panel.

Why the does the escapement method chosen use 0.3 rather than 0.4 as used in the congener fishery in the south Atlantic?

*Loligo* fisheries of California are post-spawner fisheries, the Falkland's (south Atlantic) fisheries are pre-spawn fisheries. In California, *Loligo* has already spawned nearly half of its eggs at first vulnerability to harvest.

The escapement target proxy of 0.3 seems conservative given the post-spawner status of the catch – Why?

This measure is taken in the precautionary mode since there are still uncertainties regarding the post spawn survival, transport of para-larvae, and recruitment of juveniles. As the fishery progresses, some of these issues may become clearer and the 0.3 value can be re-examined.

**PROPOSED AGENDA**  
**Enforcement Consultants**

Pacific Fishery Management Council  
DoubleTree Hotel - Columbia River  
Nestucca Room  
1401 N Hayden Island Drive  
Portland, OR 97217  
(503) 283-2111  
September 11, 2001

TUESDAY, SEPTEMBER 11, 2001 - 5:30 P.M. (or Immediately Following the Council Meeting)

**A. Call to Order**

Dave Cleary

**B. Additions to Agenda**

**C. Groundfish Management**

1. Groundfish Management Measures for 2002

**D. Salmon Management**

**E. New Items**

**F. Public Comment**

ADJOURN

PPMC  
08/27/01

**PROPOSED AGENDA**  
**Groundfish Advisory Subpanel**

Pacific Fishery Management Council  
DoubleTree Hotel - Columbia River  
Willamette Room  
1401 N Hayden Island Drive  
Portland, OR 97217  
(503) 283-2111  
September 10 - 12, 2001

MONDAY, SEPTEMBER 10, 2001 - 8 A.M.

**A. Call to Order**

Rod Moore, Chair

Roll Call, Introductions, Announcements, Approve Agenda, etc.

Agenda Overview

John DeVore

**B. Pacific Halibut Management**

B.3 Proposed Changes to the Catch Sharing Plan and Annual Regulations

John DeVore

**D. Marine Reserves**

D.1 Status Report on West Coast Marine Reserve Activities

Jim Seger

D.2 Marine Reserve Proposals for Channel Island  
National Marine Sanctuary

Jim Seger, Patricia Wolf, Matt Pickett

**C. Groundfish Management**

C.2 Marine Recreational Fisheries Statistics Survey Update

Russell Porter

C.3 Preliminary Harvest Levels and Other Specifications for 2002

Jim Hastie

C.4 Groundfish Strategic Plan Implementation  
(Capacity Reduction, Marine Reserves, and Allocation Issues)

Dan Waldeck

C.5 Rebuilding Programs

John DeVore

C.6 Exempted Fishing Permit Applications

Brian Culver, Dave Thomas

TUESDAY, SEPTEMBER 11, 2001 - 8 A.M.

Review Draft Groundfish Advisory Subpanel Statements

**C. Groundfish Management, (continued)**

C.8 Status of Fisheries and Inseason Adjustments

Jim Hastie

C.9	Amendment 15 to the Groundfish Fishery Management Plan (FMP) - American Fisheries Act	Jim Seger
C.10	Groundfish FMP Environmental Impact Statement	Jim Glock
C.11	Full Retention Measures	John DeVore
C.7	Proposed Management Measures for 2002	John DeVore

***E. Other***

WEDNESDAY, SEPTEMBER 12, 2001 - 8 A.M.

Review Draft Groundfish Advisory Subpanel Statements, Complete Unfinished Agenda Items

ADJOURN

PFMC  
08/15/01



**PROPOSED AGENDA**  
**Habitat Steering Group**

Pacific Fishery Management Council  
Double Tree Hotel - Columbia River  
Yakima Room  
1401 N. Hayden Island Drive  
Portland, OR 97217  
(503) 283-2111  
September 10-14, 2001

MONDAY, September 10, 2001 - 10 A.M.<sup>1</sup>

**A. Call to Order**

1. Introductions and Approval of Agenda Michele Robinson/Jennifer Bloeser, Co-Chairs

**B. Review of Council Actions/Directions**

Chuck Tracy

**C. Reports on Council Agenda Items**

1. D.1 Status Report on West Coast Marine Reserve Activities Jim Seger
2. D.2 Marine Reserve Proposals for Channel Island National Marine Sanctuary CINMS Staff
3. C.4 Groundfish Rebuilding Plans HSG
4. C.9 Groundfish FMP Environmental Impact Statement Jim Glock
5. F.1 NMFS Salmon Management Update Including Columbia River Flows Nora Berwick
6. F.4 Queets Coho Status Review Chuck Tracy

**D. Discussion Items**

1. Council Operating Procedures HSG
2. Regional Council Approaches to the Identification and Protection of HAPC HSG
3. Essential Fish Habitat/Magnuson-Stevens Act Review Mark Helvey and Nora Berwick

**E. Information Presentations or Updates**

1. Sacramento Winter Chinook Mortality at Clifton Pumps Mark Helvey
2. Sacramento Winter Chinook Recovery Plan Update NMFS SWR
3. San Francisco Airport Expansion Mark Helvey
4. Klamath Flow Issue Michael Rode
5. Federal Energy Regulatory Commission Relicensing Programmatic Letter Paul Engelmeyer
6. Groundfish Research Forum for 2002 Cyreis Schmitt
7. Fishing Gear Impact Research Work Plan Cyreis Schmitt

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1/ The meeting will continue on Tuesday morning starting at 8 a.m. to complete the HSG agenda.

***F. HSG Member Briefings***

HSG

***G. Public Comment Period***

***H. November Meeting Agenda***

HSG

ADJOURN

**PROPOSED AGENDA**  
**Scientific and Statistical Committee**

Pacific Fishery Management Council  
DoubleTree Hotel - Columbia River  
Umatilla Room  
1401 N Hayden Island Drive  
Portland, OR 97217  
(503) 283-2111  
September 10-11, 2001

In addition to your briefing book, please bring your Summer 2001 Newsletter, and stock assessment and STAR Panel documents received prior to the meeting.

Groundfish Stock Assessment Briefing – Monday, September 10<sup>th</sup> at 3:30 P.M. in the Riverview Ballroom. Scientific and Statistical Committee (SSC) STAR Panel representatives will report on the 2001 stock assessments.

MONDAY, SEPTEMBER 10, 2001 - 8 A.M.

**A. Call to Order and SSC Administrative Matters**

1. Report of the Executive Director
2. Approve Agenda
3. Approve June 2001 Minutes
4. Open Discussion (.5 hours)

Don McIsaac

A suggestion for the duration of each topic is provided. When the agenda is approved, priorities can be set and durations revised. Discussion leaders should determine whether more or less time is required. Work assignments are noted in parentheses, the first name is the discussion leader and second the rapporteur.

GENERAL SESSION  
8:30 A.M.

**B. Pacific Halibut Management**

2. Status of Bycatch Estimate  
(8:30 A.M., 1 hour; Hill, Stauffer) Council Agenda – Tuesday, September 11<sup>th</sup>, Morning.

Cyreis Schmitt

**C. Groundfish Management**

3. Preliminary Harvest Levels and Other Specifications for 2002  
(9:30 A.M., 3 hours; Jagielo, Francis) Council Agenda – Tuesday, September 11<sup>th</sup>, Afternoon.

Jim Hastie

LUNCH

**A. SSC Administrative and Other Matters, (continued)**

5. Review Statements B.2 and C.3  
(1:30 P.M., 1 hour)

**D. Marine Reserves**

1. Status Report on West Coast Marine Reserve Activities Jim Seger  
(2:30 A.M., .5 hours; Dalton, Zhou) *Council Agenda – Tuesday, September 11<sup>th</sup>, Afternoon.*
2. Marine Reserve Proposals for Channel Islands  
National Marine Sanctuary Patty Wolf/Sean Hastings  
(3 P.M., .5 hours; Lawson, Dalton) *Council Agenda – Tuesday, September 11<sup>th</sup>, Afternoon.*

**C. Groundfish Management, (continued)**

2. Marine Recreational Fisheries Statistics Survey Update Russell Porter  
(3:30 P.M., 1 hour; Thomson, Hill) *Council Agenda – Tuesday, September 11<sup>th</sup>, Afternoon.*

**F. Salmon Management**

3. Update on SSC Methodology Review  
(4:30 P.M., .5 hours; Allee, Byrne) *Council Agenda – Friday, September 14<sup>th</sup>.*

PUBLIC COMMENT PERIOD – 4 P.M.  
Public comments on fishery issues not on the agenda are accepted at this time.

**A. SSC Administrative and Other Matters, (continued)**

6. Finalize Statements B.2 and C.3; Review Statements D.1 (if necessary) and D.2  
(5 P.M., 1 hour)

TUESDAY, SEPTEMBER 11, 2001 - 8 A.M.

**A. SSC Administrative and Other Matters, (continued)**

7. Finalize Statement D.1 and D.2; Review Statements F.3  
(8 A.M., .5 hours)

**C. Groundfish Management, (continued)**

5. Rebuilding Programs John DeVore  
(8:30 A.M., 3.5 hours; Conser, Ralston) *Council Agenda – Wednesday, September 12<sup>th</sup>, Morning.*

LUNCH

**H. Coastal Pelagic Species Management**

2. Final Report on Market Squid Maximum Sustainable Yield Tom Jagielo/Ray Conser  
Methodology Workshop  
(1 P.M., 2 hours; Francis, Hill) *Council Agenda – Friday, September 14<sup>th</sup>.*

**A. SSC Administrative and Other Matters, (continued)**

8. Finalize Statements F.3; Review and Finalize Statements C.5, and H.2  
(3 P.M., 2 hours)

ADJOURN

PFMC  
08/22/01

## **DRAFT SUMMARY MINUTES Scientific and Statistical Committee**

Pacific Fishery Management Council  
Park Plaza Hotel  
Peninsula 4  
1177 Airport Blvd.  
Burlingame, CA 94010  
(650) 342-9200  
June 11-15, 2001

### **Call to Order**

The meeting was called to order at 8 a.m. by Chair Cynthia Thomson. Dr. Donald McIsaac, Executive Director, provided opening comments and discussed the priority of items on the Scientific and Statistical Committee (SSC) agenda. The agenda was approved.

### **Members in Attendance**

Dr. Brian Allee, Columbia Basin Fish and Wildlife Authority, Portland, OR  
Mr. Alan Byrne, Idaho Department of Fish and Game, Nampa, ID  
Mr. Robert Conrad, Northwest Indian Fisheries Commission, Olympia, WA  
Dr. Michael Dalton, California State University, Monterey Bay, CA  
Dr. Robert Francis, University of Washington, Seattle, WA  
Dr. Kevin Hill, California Department of Fish and Game, La Jolla, CA  
Mr. Tom Jagielo, Washington Department of Fish and Wildlife, Olympia, WA  
Dr. Peter Lawson, National Marine Fisheries Service, Newport, OR  
Dr. Andre Punt, University of Washington, Seattle, WA  
Dr. Stephen Ralston, National Marine Fisheries Service, Santa Cruz, CA  
Dr. Gary Stauffer, National Marine Fisheries Service, Seattle, WA  
Ms. Cynthia Thomson, National Marine Fisheries Service, Santa Cruz, CA  
Dr. Shijie Zhou, Oregon Department of Fish and Wildlife, Portland, OR

### **Members Absent**

Dr. Ramon Conser, National Marine Fisheries Service, La Jolla, CA

### **SSC Reports to the Council**

#### **Groundfish**

##### **Sablefish Three-Tier Program, Qualification with Setnet Landings**

Mr. Jim Seger presented two proposals to the SSC regarding the application of setnet landings from exempted fishing permits (EFPs - also called experimental fishing permits) to the current three-tier cumulative limit system for the primary limited entry fixed gear sablefish fishery. Alternative 1 (status quo) keeps vessel limits based on past sablefish landings using fishpots or longlines regardless of vessel participation in experimental setnet fishing for sablefish. Alternative 2 gives vessels credit for setnet landings taken under EFPs from 1984-1987. Credit for EFP setnet landings is primarily an issue of permit allocation with no significant habitat or biological impacts. Under alternative 2, a single vessel would move from tier 2 to tier 1, which would decrease the cumulative limit for tier 1 permit holders by less than 1%. There is an incentive issue involved since the affected vessel incurred costs by participating in the experimental setnet sablefish fishery. Giving credit for landings would encourage participation in other experimental programs.

## Marine Recreational Fisheries Statistics Survey Update

Mr. Russell Porter with Pacific States Marine Fisheries Commission (PSMFC) briefed the SSC on the status of the Recreational Fishery Information Network (RecFIN) program that is administered by the PSMFC. Inadequacies in the RecFIN budget could eliminate Marine Recreational Fisheries Statistics Survey (MRFSS) field sampling on a coast-wide basis from November 2001 through February 2002. The RecFIN database provides information essential to stock assessments of some species. A reduction in the data quality and coverage in the RecFIN database due to budget limitations could negatively impact future stock assessments for several recreationally-important species such as black rockfish, bocaccio, lingcod, and cowcod.

Mr. Porter reported there has been continued progress toward integrating the MRFSS data with information collected by the state agencies. This is an important improvement to the RecFIN database and the SSC recommends these efforts continue.

There has also been continued progress toward rectifying differences between state and MRFSS estimates when both are available. The analysis and report for Oregon has been completed. A report examining the state-produced and MRFSS estimates for Washington is expected in August. The SSC looks forward to seeing this report.

## Stock Assessment Priorities for 2002

Ms. Cyreis Schmitt (National Marine Fisheries Service) presented an overview of the proposed stock assessment process for the 2002 cycle. Only three assessment projects were selected – whiting, cabezon, and either bocaccio or continued development of methods for assessing data poor species. The proposed list is short, because of the substantial ongoing review of historical fishery and survey data, a review which may affect future stock assessments. Changes include:

- Adjustments to historical triennial survey data by taking account of "water hauls."
- Potential restratification of survey data based on new habitat information.
- Revised estimates of historical foreign catch.
- New estimates of groundfish trawl discard rates.

In response to last year's SSC request for a longer stock assessment planning horizon, NMFS developed a draft proposal for assessments and rebuilding analyses for the 2002 through 2010 cycles. The SSC suggests the following changes to that proposal:

- Conduct yellowtail rockfish assessments on a 3-year cycle. The next assessment would be in the 2003 rather than the 2004 cycle.
- Conduct a canary rockfish assessment in the 2002 cycle, contingent on having age data from the 2001 triennial survey in time to meet the earlier stock assessment schedule.

## Exempted Fishing Permit Applications

Two applications for EFPs – one dated April 3, 2001 and the other dated May 16, 2001 – were presented to the SSC. A third proposal from the California Department of Fish and Game (CDFG) was not reviewed due to late submission.

The April 3 application, which was submitted by the Washington Department of Fish and Wildlife, is designed to measure the bycatch rates of canary and other rockfish in the arrowtooth flounder fishery. The proposal requires vessels covered by the EFP to conduct their arrowtooth tows north of 48° N latitude, where it is expected that fishers would achieve lower canary rockfish bycatch rates. The SSC raised questions regarding potential confounding of gear and area effects, due to lack of a control study in the area south of 48°. The applicants indicated it would be possible to use the federal observer program to estimate the area effect. However, it is not clear to the SSC whether the combination of EFP and federal observer data would be adequate for this purpose. The SSC recommends that information be included in the EFP application regarding estimated quantities of catch by species expected for the duration of the study.

The May 16 proposal is designed to be a collaborative project among CDFG, vessel owner Mr. Kenyan Hensel and the Pacific Marine Conservation Council to test the feasibility of using vertical hook-and-line gear to selectively catch yellowtail rockfish without significantly increasing the incidental bycatch of canary rockfish. The SSC notes this is not a statistical study to measure selectivity, but represents an opportunity for one vessel to test the feasibility of selective vertical hook-and-line gear. The results of this study could not be extrapolated to the rest of the fleet. The SSC recommends the following information be included in the EFP application, (1) the end point of the EFP, such as maximum number of trips under the EFP or an ending date, (2) a provision to end the study if allowable canary bycatch limits are prematurely exceeded, (3) a provision that an observer be onboard for all trips, and (4) estimates of the quantities of catch by species expected for the duration of the study.

For future reference, the SSC requests guidance from the Council regarding how rigorously EFP applications should be reviewed on a scientific basis. On the one hand, EFPs are not research permits. On the other hand, in cases where the results of studies conducted under EFPs are used as a basis for changes in fishery regulations, it will be important that adequate justification be provided for such changes.

### Rebuilding Plans

The SSC discussed aspects of the widow rockfish, lingcod, darkblotched rockfish, and Pacific ocean perch (POP) rebuilding analyses and associated plans. In addition to specific issues relating to each analysis, the SSC also discussed the more general issue of how to incorporate new data and analyses into existing rebuilding plans.

Harvest guidelines and rebuilding trajectories in existing rebuilding plans may not be consistent with information in new stock assessments. This becomes problematic if, for instance, the new information causes the rebuilding time to cross the 10-year threshold. The need is to identify which variables in the rebuilding plans should be subject to updating and which should remain fixed. This issue is not peculiar to this Council but is being faced by Councils nationwide. The SSC proposes to review the issue in consultation with other similar interested entities and to have recommendations for the Council within the next year. Until the review is completed, the SSC recommends rebuilding plans be based on existing rebuilding analyses.

A computer program has been developed by Dr. Andre Punt to perform routine rebuilding calculations specified by the SSC (Punt, A.E., 2001 draft. SSC default rebuilding analysis. Technical specifications and user manual. Version 1.0000001. 12 p.). The calculations in the program have been developed and validated in collaboration with Dr. Alec MacCall. The program also produces thorough documentation of data and methodologies used. This program will provide a standard for comparing rebuilding analyses and is endorsed by the SSC.

Specific comments on rebuilding plans are as follows:

Widow rockfish – Dr. Alec MacCall provided a revised rebuilding analysis for widow rockfish. The SSC recommends this analysis be used to develop the rebuilding plan. The current rebuilding schedule for widow rockfish implies a large increase in allowable fishing rates once rebuilding is achieved. At the Council's request, Dr. MacCall has provided an alternative schedule with a harvest rate that increases as rebuilding progresses, with time to rebuilding being the same as the fixed rate option. The trade-off is that initial harvests must be lowered to offset the later increases.

Lingcod – The lingcod rebuilding plan is based on the 1997 stock assessment, covering the northern area and extending into Canada. New assessments were conducted in 1999 (southern area) and 2000 (southern and northern areas). Information from the latter assessments has not been formally incorporated into an updated rebuilding analysis. As a result, the rebuilding plan is not consistent with the most recent stock assessments. In keeping with its general recommendations in this regard, the SSC recommends the existing lingcod rebuilding analysis be used in the rebuilding plan, with updates and revisions delayed until the SSC has the opportunity to establish general guidelines for revising and updating rebuilding analyses.

Darkblotched rockfish – The rebuilding analysis for darkblotched rockfish includes 12 alternatives based on random selection of actual recruits or recruits per spawn for three different time periods: 1963-1998 (all

years), 1984-1998 (recent years) and 1984-1994 (recent years minus the 1995-1998 period for which the recruitment projections are based on more limited information). For 10 of the alternatives, median rebuilding time with no fishing is 7-9 years and the rebuilding time frame is 10 years. For the remaining two options, median rebuilding time with no fishing is 10 years, with a rebuilding time frame of 43 years. These latter options are based on time periods that eliminate (1984-1994) or downplay (1963-1998) the probability that the high recruits per spawn estimated for 1995-1996 will recur in the next 10 years.

The rebuilding plan must be adopted by November 2001. Already new information has become available from the 2000 Miller Freeman Research Vessel survey that would affect the analysis. In addition to providing 12 alternatives, the rebuilding author also provides a preliminary analysis that includes this most recent survey data and is based on the 1984-1998 time period. The results of this preliminary analysis suggest a median rebuilding time without fishing of 11 years and a rebuilding time frame of 44 years. The SSC recommends the 2000 survey data be incorporated into the rebuilding plan. This may necessitate accelerated reading of age structures from the 2000 survey data. In addition, resampling for projections should be based on 1984-1994 (rather than 1984-1998) recruitments, because more recent years are poorly estimated and recruits per spawner exhibit a trend. The best choice of  $B_0$  is not clear. The revised analysis should continue to present results based on both  $B_0$  alternatives, while providing a more detailed rationale for each.

POP – A new rebuilding plan conforming to the guidelines set by the SSC is needed to finalize the POP rebuilding plan. With the recent development of a standardized program for conducting such analysis (Punt 2001), this task is much simplified. The SSC groundfish subcommittee will work with the stock assessment author to ensure a new rebuilding analysis is completed by the September meeting.

## **Marine Reserves**

### **Marine Reserves in the Channel Islands National Marine Sanctuary**

The SSC was briefed by Mr. Sean Hastings and Dr. Satie Airame from the Channel Island National Marine Sanctuary (CINMS) about ongoing efforts to create a network of marine reserves within the Sanctuary's boundaries. The SSC first considered the contents of the Facilitator's Report (Exhibit E.2, Supplemental Attachment 3), which has been provided to the Sanctuary Advisory Committee (SAC) in lieu of a consensus recommendation by the Marine Reserves Working Group (MRWG). The Facilitator's Report highlighted a number of areas of substantial agreement among members of the MRWG (e.g., a general statement of the problem, issues of concern, goals and objectives, and implementation recommendations). However, the MRWG was unable to reach consensus on a number of important issues, including 1) the size of reserves, 2) the location of reserves, 3) the use of "limited take" areas, 4) the phasing in of reserves, and 5) the importance of fisheries management outside of reserves. The divergence in opinion within the MRWG, with respect to reserve size, led to a range of alternatives between a 12%-24% area set aside. Because the MRWG could not reach a unanimous consensus, the SAC is now charged with forwarding a recommendation to the Sanctuary manager for action.

The SSC was impressed with the depth of thought that has gone into the process thus far. In particular, the formalized effort to balance the various stakeholders' concerns should provide robust solutions to differences among user groups. It is clear that a thorough consideration of issues has been completed, particularly with regard to the development and reconciliation of siting criteria. The SSC believes the process, as it has evolved, could prove useful in future efforts to establish marine reserves elsewhere, including areas under Council authority. However, the infrastructure required to undertake a similar process is substantial and would require a significant allocation of scarce Council resources.

In response to the Council's and SSC's request for more information following the April meeting (see Exhibit E.2, Attachment 1), Mr. Hastings and Dr. Airame provided the SSC with many of the scientific papers that were considered by the Sanctuary Science Panel in reaching its determination that a 30%-50% area set aside was required to meet fishery management objectives within the CINMS. However, the conclusions one might draw from that body of literature are largely predicated on loose or negligible controls on fishing effort outside of reserve boundaries, a situation unlike that on the West Coast of the United States. In fact, an evaluation of the costs and benefits of effort versus area controls on fishing is lacking in the documentation provided thus far. This is a key issue since the Council has recently imposed highly restrictive controls on fishing effort in the groundfish fishery and, as a consequence, the necessity of 30%-50% area set asides for the purpose of



managing groundfish species is not obvious. At the request of the SSC, Dr. Airame agreed to provide further documentation on how the Sanctuary Science Panel arrived at its conclusions regarding reserve size. For its part, the SSC expressed a willingness to establish an ad hoc committee at the direction of the Council, specifically to evaluate the justification for large marine reserves to achieve fisheries management objectives for Council fishery management plan species.

The SSC has also received a draft report on the socioeconomic effects of alternative reserve options and has requested it receive the final report, once it is completed. The SSC socioeconomic subcommittee will review that report, once it is received.

It is very important that further dialogue continue between representatives of the CINMS and members of the Council family. The extensive groundwork that has already been laid could provide the framework for future efforts by the Council to establish marine protected areas of its own. Although the amount of reserve area under consideration by the Sanctuary is relatively small, the action is precedent setting, and a thorough consideration of issues is warranted.

### **Highly Migratory Species**

#### **Public Review Draft of the Highly Migratory Species (HMS) Fishery Management Plan (FMP)**

The SSC's Highly Migratory Species (HMS) Subcommittee met on June 10 to review the "Draft FMP and Environmental Impact Statement (EIS) for U.S. West Coast Based Fisheries for Highly Migratory Species," dated May 2001. This statement represents the outcome of the SSC's consideration of the HMS Subcommittee's findings.

#### **General Comments and Recommendations**

The draft FMP represents significant progress toward development of a management plan for HMS. For instance, the fishery descriptions (Section 2) and discussions of bycatch by fishery sector (Section 5) are well developed. The SSC recognizes the HMS Plan Development Team (HMSPDT) attempted to include in the FMP all management options identified during the scoping process to comply with National Environmental Protection Act (NEPA) requirements. However, many of the options contained in Section 8 take the form of brief conceptual descriptions of logbook/observer programs, limited entry options, and longline fishing options in the exclusive economic zone (EEZ); and the analysis of such options is very limited. These issues are complex and likely to have significant repercussions for HMS fisheries. The options will need to be more fully developed and the analyses considerably expanded in order to meet NEPA requirements and be considered for implementation by the Council.

Development of the draft FMP has been a daunting task, and development and analysis of the ninety options contained in the FMP will require considerably more time and resources. The SSC fully appreciates the importance of issues such as logbook/observer programs, limited entry, and longline fishing in the EEZ. However, if the Council wishes to move forward expeditiously with the draft FMP, the SSC recommends the scope of the FMP be initially limited to addressing minimum requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) – such as maximum sustainable yield (MSY)/optimum yield (OY) control rules, bycatch, essential fish habitat, and community impacts. Given the importance of "federalizing" the fisheries in some manner, the FMP could also include measures that achieve such federalization. However, depending on how soon the Council wishes to submit the draft FMP for public comment, it may be advisable to exclude options that affect fisheries in ways that deviate significantly from the status quo and that would require major elaboration and analysis to meet NEPA requirements. The Council could framework the management tools needed to address substantive issues not addressed in the draft FMP. Once the FMP is approved, subsequent amendments could be undertaken to address those issues.

In terms of addressing Magnuson-Stevens Act requirements, the draft FMP appears to provide considerable material for addressing the MSY and bycatch provisions of the Act. However, the sections of the FMP on the Characteristics of Support Industries and Communities and the Regulatory Flexibility Act (RFA) analysis are requirements under the Magnuson-Stevens Act and need completion before the plan is made available for

public comment. The RFA analysis currently contained in the draft FMP is largely limited to assertions that the options will not have a disproportionate impact on small entities. The RFA analysis will need to address other considerations as well. For instance, the analysis will have to document whether a substantial number of small entities are affected by the proposed management actions. It would also have to explain why the preferred option was selected over other options that would minimize economic effects on small entities and, if so, why the preferred option was selected instead. RFA requirements are specified in NMFS Guidelines for Economic Analysis of Fishery Management Actions, dated August 16, 2000.

The SSC also has comments on specific sections of the draft FMP, as follows:

Section 2.4 – Characteristics of Support Industries and Communities (p. 27)

A placeholder for this section is included in the draft FMP, but the section is not yet completed. It is important the Magnuson-Stevens Act requirement to consider community effects be addressed before the FMP is distributed for public comment.

Section 3 – Status of Fish Stocks

The SSC reviewed the aspects of the draft FMP related to evaluating the status of stocks relative to overfishing criteria. The SSC supports the MSY and OY control rules developed for the HMS, but recommends they be presented separately for each management unit species to improve clarity of presentation.

The lack of information for some species will lead to considerable uncertainty when determining stock status using the control rules. This means that any determinations regarding whether overfishing is occurring or stocks are overfished will be highly uncertain. The SSC recommends the draft FMP link the data/analysis requirements identified in FMP Section 8.7 more directly with the need to classify stocks using the control rules and to implement any resultant management actions. In particular, the SSC notes that estimates of the catches off Mexico are not available, increasing uncertainty substantially for some species.

The information in Table 3.3 should be restricted to the estimates derived from analyses of data rather than those based on assumptions about the ratio of  $B_{MSY}$  to  $B_0$ , estimates of the intrinsic rate of growth should be replaced by the qualitative conclusions that can be inferred robustly from the analyses based on demographic models. The information presented does not permit a robust evaluation of the sustainability of regional catches of sharks and billfishes. The SSC recommends this be reflected in Table 3.4. The productivity estimates reported in the draft FMP are based on analyses in Au *et al.* (in press). The SSC should review these analyses.

The proposed MSY and OY control rules differ from those applied by international bodies such as Inter-American Tropical Tuna Commission (IATTC). The SSC recommends mechanisms be developed to deal with any possible conflicts in harvest guidelines that may arise from the use of different control rules.

Although the draft FMP does not specify an annual management cycle, an annual stock assessment and fishery evaluation (SAFE) document will be produced. The SSC recommends the SAFE document include summaries of available data and assessments by international bodies (e.g., tunas under the IATTC). The SSC notes further that the current assessment framework does not include an independent review process. While assessments conducted by international bodies are already subject to peer review, this is not the case for the proposed assessments for species that are not assessed by international bodies. The SSC recommends a process be developed for independent review of any such assessments; the SSC should be part of this process.

Section 8.2 – Management Goals and Objectives (pp. 3-4) and Section 8.5.3 - Evaluation Factors (pp. 15-16)

Section 8.2 describes 17 goals and objectives of the draft FMP and Section 8.5.3 describes 13 evaluation factors, which are used as the basis for evaluating management options contained in Section 8. Many of the 13 evaluation factors are worded similarly to some of the 17 goals and objectives; moreover, the twelfth evaluation factor (“meeting the objectives of the HMS FMP”) ensures all of the goals and objectives not already mentioned are encompassed in the evaluation factors. Some clarification is needed regarding why

the distinction is made between the FMP goals and objectives and the evaluation factors. Also, despite the fact many of the management options contained in the draft FMP have significant allocation implications, none of the goals and objectives directly point to the need for fairness and equity in allocation decisions.

#### Section 8.5.4 – Elements of Economic Analysis

Sections 8.5.4.1 and 8.5.4.2 provide a discussion of theoretical concepts relevant to economic analysis. Expectations are subsequently raised regarding the presence of an analysis in the FMP that applies these theoretical concepts. For instance, Section 8.5.4.3 makes reference to “economic analyses that follow”. Section 8.5.4.4 states that “A seven percent real discount rate is used in the analysis below....”. However, subsequent sections of the FMP contain no such economic analysis. Unless such analysis is completed and subject to SSC review before the draft FMP is submitted for public comment, the SSC recommends Section 8.5.4 be removed from the FMP.

#### Section 8.5.5.1.2 – Licensing (pp. 25-28)

Federal permits for commercial HMS fishing vessels are discussed in options 70-71, federal recreational permits for HMS anglers in option 72 and federal and/or state permits for HMS recreational vessels (including private boats) in options 73-74.

The SSC agrees with the H MSPDT’s conclusions regarding the potential research, conservation, and management benefits of having a permit system that allows ready identification of all HMS fishery participants. However, the SSC does not agree with the conclusion that federal permits as specified in options 70-74 would “indirectly contribute to reducing fishing mortality” (a claim which appears to be based on the assumption that increased information necessarily results in additional harvest restrictions). It is also not clear why federal permits would “increase net benefits to the nation.” Decisions regarding these options will require close collaboration with the states and a careful delineation of costs. Costs of federal permits for recreational anglers may be particularly difficult to predict, given the unprecedented nature of such a program.

#### Section 8.5.5.1.3 – Reporting/Monitoring Requirements (pp. 29-32)

Options 76-77 pertain to logbooks, options 78-79 to observer programs, option 80 to a “comprehensive at-sea data collection plan” and option 81 to vessel monitoring systems (VMS).

All of these options are presented as ideas for which programs would need to be developed. The analysis of these options indicates that “limited expenses” would be imposed on fishing entities, and the options would “not have a disproportionate effect” on small relative to large entities. This may or may not be true, depending on the specific details of the monitoring programs.

#### Sections 8.5.5.2 – Surface Hook-and-Line Fishery (pp. 33-36), Section 8.5.5.3 - Drift Gill Net Fishery (pp. 36-46) and Section 8.5.5.5 - Longline Fisheries (pp. 47-52)

These sections of the draft FMP include a discussion of open access versus limited entry options for three fishery sectors – surface hook-and-line (options 14-15), drift gillnet (options 22-24) and longline (option 43) fisheries. Section 8.5.5.5 also includes additional options pertaining to longline fishing in the EEZ (options 38-42).

The SSC strongly supports consideration of management measures that address overcapacity in HMS fisheries. However, the limited entry options described in the draft FMP are only conceptual in their current form. The SSC is aware of the Council’s expressed intention to consider limited entry after the FMP is adopted. Numerous details of limited entry options would have to be developed and analyzed at that time.

The analysis of options 22-24 includes a discussion of the effects on the drift gillnet fishery of a Biological Opinion (BO) issued by NMFS to protect leatherback turtles. Although such information is relevant to understanding the status of that fishery, it is important the analysis also explicitly distinguish between the effects of the BO (which was authorized by the Endangered Species Act) and the effects of the fishery management options being considered under the Magnuson-Stevens Act.

The analysis of option 41, which would allow pelagic longline fishing in the EEZ under an exempted fishing permit (EFP) program, focuses on the potential benefits afforded by the opportunity to gather scientific and/or fishery information. The analysis should also indicate that a prohibition on longline fishing in the EEZ (as

delineated in option 40) would be a necessary pre-condition for establishment of an EFP program and should include an evaluation of the effects of such prohibition on the longline fishery.

#### Section 8.5.5.8 – Recreational Fisheries (pp. 57-62)

This section includes options for federalizing management of the recreational fishery (options 61-62). Option 61 may have potentially significant ramifications, for instance, in terms of the role of the state fish and game commissions relative to federal management, changes in state legislation or regulations needed to authorize or facilitate federalization, analysis and actions needed to ensure (as specified in the draft FMP) that “the regulations would have to be made consistent with the Magnuson-Stevens Act” (p. 60). Such ramifications will need to be more fully understood in order to evaluate the feasibility, desirability, and costs associated with this option.

#### Section 8.5.6 – Measures to Establish Harvest Quotas (pp. 68-69)

Option 90 appears to pertain to two separate issues, (1) how to establish total harvest quotas for vulnerable species on the basis of an OY proxy, and (2) how the distribution of such quotas between commercial and recreational sectors should be based on historical landings. (1) is a scientific issue and (2) is an allocation issue for which historical landings represents one of any number of allocation criteria that could be considered. Given the potentially significant consequences of these issues, the SSC recommends the Council not take action on Option 90 until these issues are further developed, analyzed, and reviewed.

#### Section 8.5.7 – Standardized Reporting of Bycatch and Measures to Minimize Bycatch (pp. 70-85)

There is no discussion of standardized reporting in this section. The SSC recommends that reference be made in this section to the logbook/observer program/VMS options previously described in Section 8.5.5.1.3 (pp. 29-32), given the potential importance of such programs for reporting bycatch.

Options 16, 27, 44, and 56 respectively propose that performance standards be adopted that provide incentives to reduce bycatch for participants in the surface hook-and-line, drift gillnet, longline, and coastal purse seine fisheries. According to the FMP, “Performance standards can be expressed as a percentage of the total catch by weight or number as well as specific goals for individual species of particular concern” (pp. 8-70). The SSC notes that performance standards of this type may reflect not only the effect of bycatch avoidance measures, but also changes in stock abundance of bycatch species and regulatory measures such as trip limits.

#### Section 8.7 – Research and Data Needed for Management (pp. 90-97)

The information needs for each species consist of a lengthy list that includes items that are critical for management and those that would be “nice to know.” The SSC recommends the HMS PDT prioritize the items in the list, based on the requirements for conducting assessments, applying MSY and OY control rules, and conducting economic analysis of pending management actions. This will be particularly important for ensuring that critical HMS needs are incorporated in the Council’s Research and Data Needs and Economic Data Plan.

#### Minor Editorial Corrections

- In Section 8, reference is made to an “Option 6” in the second to last paragraph on p. 42 and in the first and second paragraphs on p. 43. What is Option 6?
- Section 8 states “The Council is currently considering under the Coastal Pelagics Amendment an option of evaluating the use of grates to cover openings of holds through which fish are pumped...” (p. 67). The statement should be edited to reflect the fact that use of such grates has been approved.
- Some of the research and data needs identified in Section 8.7 (pp. 90-97) are lettered, while others are bulleted. The distinction between lettered and bulleted items should be clarified.
- The title of Section 8.8 on p. 97 (MSFCMA Specifications) should be renamed something that specifically refers to total allowable level of foreign fishing, as it deals only with that one issue.

## **Coastal Pelagic Species**

### **Pacific Mackerel Harvest Guideline and Other Specifications for 2002**

Dr. Kevin Hill discussed the 2001-2002 Pacific mackerel harvest guideline (HG) with the SSC. The recommended HG is 13,837 mt. The Coastal Pelagic Species Management Team (CPSMT) recommends closing the directed fishery after 6,000 mt is landed, then switching to an incidental tolerance of 45% of mackerel in other coastal pelagic species fisheries. If a significant portion of the HG remains, a directed fishery would re-open toward the end of the season.

The SSC notes that the HG is based on the same stock assessment methodology used in 2000, with the addition of one new data point. This methodology is scheduled to be reviewed by a stock assessment review panel in 2002.

### **Market Squid Maximum Sustainable Yield (MSY) Methodology Review Workshop**

Ms. Thomson provided a verbal report to the Council. She noted that the workshop was well attended, and the review panel accomplished their goals and objectives. Discussions included biology of market squid, status of the squid fishery, and potential management strategies. Modeling methods also received much attention. She reported the Panel expects to complete their report in time for SSC review at the September Council meeting.

### **Public Comment**

There was no formal public comment.

### **Adjournment**

The SSC adjourned at approximately 4 p.m., Tuesday, June 12, 2001.

PFMC  
08/22/01

