

## PROPOSED AGENDA Groundfish Management Team

Pacific Fishery Management Council  
Red Lion Hotel Sacramento  
Shasta Room  
1401 Arden Way  
Sacramento, CA 95815  
(916) 922-8041  
September 10-14, 2000

SUNDAY, SEPTEMBER 10, 2000 - 1 P.M.

### **Call to Order**

Jim Hastie, Co-Chair

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

### **Groundfish Management**

- G.10. Proposed Management Measures for 2001  
(**Council Action:** Adopt for Public Review)
- G.11. Status of Fisheries and Inseason Adjustments  
(**Council Action:** Consider Adjustments in Management Measures)

MONDAY, SEPTEMBER 11, 2000 - 8 A.M.<sup>1/</sup>

### **Groundfish Management (continued)**

- (Continue G.10, if necessary)
- G.2. Groundfish Strategic Plan  
(**Council Action:** Consider Final Adoption of Plan)
- G.7. Sablefish Permit Stacking Concept  
(**Council Action:** Consider Adoption for Public Review)

### **Marine Reserves**

- B.1. Marine Reserves Phase I Considerations Report  
(**Council Action:** Management Tool Application Finding)
- B.2. Marine Reserves Phase II Considerations  
(**Council Action:** Decision If and How to Proceed with Marine Reserve Implementation)

### **Habitat Issues**

- C.2. Report of the Habitat Steering Group (HSG)  
(**Council Action:** Consider HSG Recommendations)

### **Groundfish Management (continued)**

- G.3. Exempted Fishing Permit Applications  
(**Council Action:** Recommendations to NMFS on Research and Other Exempted Fishing Permit Applications)
- G.4. Rebuilding Programs for Canary Rockfish and Cowcod  
(**Council Action:** Adopt for Public Review Draft and Public Hearing Schedule)
- G.5. New Stock Assessments for Lingcod and Pacific Ocean Perch  
(**Council Action:** Consider Rebuilding Plan and Season Adjustments)
- G.6. Preliminary Harvest Levels and Other Specifications for 2001  
(**Council Action:** Adopt Preliminary Specifications for Public Review)
- G.9. Stocks to be Assessed in 2001 and Agency Commitments

### **Review Draft Groundfish Management Team Statements, Complete Unfinished Agenda Items**

ADJOURN

PFMC  
08/25/00

1/ Meeting continues as necessary through Thursday, September 14, 2000.

F:\PFMC\MEETING\2000\September\Groundfish\Ancil-A.GMT

**DRAFT SUMMARY MINUTES**  
**Groundfish Advisory Subpanel**

Pacific Fishery Management Council  
DoubleTree Hotel - Columbia River  
Willamette Room  
1401 North Hayden Island Drive  
Portland, OR 97217  
(503) 283-2111  
June 26 - 28, 2000

**Call to Order**

The meeting was called to order at 11 a.m. by Mr. Don Hansen, Chair.

**Members in Attendance**

Mr. Wayne Butler  
Mr. Barry Cohen  
Mr. John Crowley  
Mr. Ken Culver  
Mr. Tom Ghio  
Mr. Don Hansen, Chair  
Mr. Marion Larkin

Mr. Peter Leipzig  
Mr. Rod Moore, Vice Chair  
Mr. Dale Myer  
Dr. Mark Powell (for Dr. Joshua Sladek Nowlis)  
Mr. Kelly Smotherman  
Mr. Frank Warrens

**Groundfish Advisory Subpanel Comments to the Council on June 2000 Agenda Items**

**MARINE RESERVES**

The Groundfish Advisory Subpanel (GAP) received a briefing on the staff report on Marine Reserves - Phase I and has the following comments.

The GAP believes establishing marine reserves is one of many tools that should be available to the Council. However, the GAP will withhold comment on establishing reserves in any particular area until Phase II is begun.

The GAP disagrees with presenting various approaches as "options", which lead to the assumption that other variations have been considered and rejected. The GAP agrees potential percentages of protected areas or biomass should be identified (such as the 5%, 20%, 35%, and 50% presented in the report) in order to give the public some idea of the degree of protection that is contemplated. However, the GAP believes these concepts should be presented in the form of descriptive paragraphs and not identified as options.

The GAP notes the Ad-Hoc Marine Reserve Committee and the Ad-Hoc Groundfish Strategic Plan Development Committee are operating on parallel tracks, with both committees discussing marine reserves. The GAP recommends action on marine reserves be taken in the context of the Council's strategic plan, and not as a stand-alone management measure.

Finally, the GAP recommends the entire staff report be made available for public review, so the public has the benefit of the full range of discussion.

## STRATEGIC PLAN

The GAP spent several hours discussing the draft plan. Our ability to fully comment was hampered by the fact most GAP members did not have time to review the plan prior to the GAP meeting. The GAP notes sections of the plan call for smoother flow of information and hope this applies to the Council's advisory entities.

In general, the GAP agrees a strategic plan is helpful in allowing participants in the fishery to develop their individual plans for the future. The vision statement in the draft plan is generally acceptable, although the GAP suggests one editorial change: on page 7 of the draft plan, in the first paragraph under "1. The Fishery", add at the end of the third sentence - "and continues to be adjusted to be in balance with other components of the strategic plan." If the plan is implemented, additional reductions in harvest capacity may be necessary to keep the balance envisioned.

Beyond the vision statement, the GAP has difficulties in providing constructive comments at this time. There are concerns about inconsistencies within the implementation section. For example, the ability to accurately manage on a weak-stock basis requires a major revision of both state and federal laws, regulations, and policies, as well as a considerable infusion of funds. The Council has no control over these matters. How can weak stock management be a priority if there is no way to control its achievement?

Similar problems are found with capacity reduction language. The GAP agrees, as it has many times before, that capacity reduction should be the highest priority. However, in order for capacity reduction to work, some sort of allocation is necessary. The draft plan gives capacity reduction a high priority, but considers allocation to be an intermediate-to-long-term objective.

The GAP also believes insufficient thought has been given to the cumulative effect the various goals will have. It is unclear what kind of priority is given, if any, to the various proposed recommendations; or if any thought has been given to what happens if we do several of these simultaneously.

Many of the recommendations will also require substantial funding. Where is the funding to come from? Should we adopt a "pay-as-you-go" strategy, so recommendations are not carried out if the source of funding is unclear?

One area where we strongly agree is the need to build trust among advisory entities. The GAP and the Groundfish Management Team (GMT) often meet jointly and try to present consensus recommendations to the Council. We would welcome the opportunity to work in a similar cooperative manner with other advisory entities.

We also agree the Council needs to more clearly define the roles and responsibilities of the GAP. The GAP makes a concerted effort to be responsive to the Council and its constituents, but we are hampered by limited meeting times and conflicts between GAP meetings and Council actions that require participation by GAP members. We share a single Council staff member with the GMT, which puts a strain on both bodies and certainly on that staff member. These issues need to be addressed if the GAP is to continue to be effective.

GAP members will provide individual comments on the draft plan as they get a chance to review it more thoroughly. While we will make an attempt to provide more comprehensive comments as a group, it is unlikely we will be able to do so prior to the next strategic planning committee meeting for the simple reason most GAP members have to tend to their fishing and processing operations. Our preference would be for the Council to delay sending the draft plan out for public review until September. In any case, when public review is complete, the GAP believes one or two representatives of the GAP and other advisory entities be involved in analysis of public comments.

## **STOCK ASSESSMENT PRIORITIES FOR 2001**

The GAP reviewed the list of stocks proposed to be assessed in 2001 and agrees with the choices made. However, the GAP has the following additional comments:

1. Although convening a Stock Assessment Review (STAR) Panel for three assessments is difficult, NMFS should take this step with the Dover, sablefish, and shortspine thornyhead assessments. These species are caught in conjunction with each other and reviewing the assessments as a group makes more sense.
2. STAR Panel meetings should be held in locations where sufficient computer and administrative support is available, including telephones, printers, and copying machines.

## **STATUS OF FISHERIES AND INSEASON ADJUSTMENTS**

The GAP met jointly with the Groundfish Management Team (GMT) and offers the following recommendations for inseason adjustments:

### Limited Entry

1. For all gears, increase slope rockfish cumulative limits in the south to 7,000 pounds per two-month period.
2. For all gears, reduce shelf rockfish cumulative limits in the south to 500 pounds per month.

These two recommendations are made in the interest of protecting weak stocks.

3. For fixed gear, increase nearshore rockfish cumulative limits in the north to 5,000 pounds per two-month period, with a maximum of 1,800 pounds being species other than blue or black rockfish.
4. For fixed gear, increase nearshore rockfish cumulative limits in the south to 2,000 pounds per two-month period.

These two recommendations are made to allow target attainment.

5. For the fixed gear daily-trip-limit sablefish fishery, increase the cumulative limit to 3,300 pounds per two-month period, while maintaining the daily limit of 300 pounds.

This recommendation is made to allow a reasonable harvest of sablefish in this fishery while avoiding confusion with different daily trip limits.

6. For the small footrope trawl fishery in the north, remove the current two-month cumulative limit on yellowtail rockfish and substitute the following:
  - a. The "per trip" limit for yellowtail rockfish is the sum of 10% of the weight of arrowtooth flounder plus 33% of the weight of flatfish other than arrowtooth, not to exceed 7,500 pounds of yellowtail per trip.
  - b. A vessel using a small footrope may not land yellowtail unless it is also landing flatfish.
  - c. A vessel may not exceed the 30,000-pound cumulative limit per two-month period regardless of gear used.

### Open Access

1. For slope rockfish in the south, increase the cumulative limit to 1,000 pounds per two-month period. This will allow a modest increase while protecting weak stocks.

2. For nearshore rockfish in the north, increase the cumulative limit to 2,500 pounds per two-month period, with a maximum of 900 pounds of species other than black or blue rockfish. The GAP understands allowing this higher cumulative limit may result in early attainment and closure for this fishery.
3. For nearshore rockfish in the south, increase the cumulative limit to 1,600 pounds per two-month period. This will allow a year-round fishery to be maintained.
4. For the fixed gear daily-trip-limit sablefish fishery, increase the cumulative limit to 3,300 pounds per two-month period, with a daily-trip-limit of 300 pounds.

### **SABLEFISH THREE-TIER FISHERY SEASON AND LIMITS**

The GAP received a report from the GMT on options for the sablefish three-tier fishery.

The GAP recommends adopting a more conservative model which would allow cumulative limits of 85,500 pounds; 38,500 pounds; and 22,000 pounds for Tiers 1, 2, and 3 respectively, in an eight-day season.

The GAP was unable to agree on a starting date for the 2000 season. The two dates recommended were August 6 and September 1. Advantages and disadvantages were cited for both dates by representatives of the fixed gear fishery.

At the request of Council member Mr. Bob Alverson, the GAP also discussed potential modifications to existing regulations regarding permit transfers. The GAP recommends regulations be changed to allow a permit to be transferred once each calendar year. A transferred permit could not be used until the beginning of the next cumulative period following date of transfer.

### **PLAN AMENDMENT TO ADDRESS BYCATCH AND MANAGEMENT MEASURE ISSUES**

The GAP received a briefing on the proposed amendment to the Pacific groundfish fishery management plan to address bycatch.

The GAP supports the alternatives identified as "preferred" for bycatch definitions, standardized reporting methodologies, bycatch reduction provisions, and annual management framework provisions.

For removal of limited entry permit endorsements (identified as a housekeeping measure), the GAP recommends the Council adopt alternative number 2.

### **AMERICAN FISHERIES ACT MANAGEMENT MEASURES**

The GAP received an update on analysis of the American Fisheries Act (AFA). From the initial Council staff presentation, it was clear there was confusion in interpreting the GAP's recommendation from the April Council meeting.

As clarification, it was the intent of the GAP there be three separate qualification criteria for vessels. These criteria are specific to each sector and qualify the vessel only for that sector. They were not meant to cross qualify a vessel from one sector into all sectors.

The GAP recommends Council staff complete the draft amendment, so we can provide constructive comments on a final draft.

### **PROCESS FOR TECHNICAL REVIEW AND MONITORING OF REBUILDING PLANS**

The GAP had a discussion with Ms. Cyreis Schmitt concerning the various approaches that could be used to review rebuilding plans and methods to monitor the rebuilding of concerned stocks.

The GAP had numerous questions about how a review of rebuilding will occur every two years when new assessments will likely only occur once every three years.

The GAP was also concerned for many of the species for which there are, or will be, rebuilding plans, the reduced catch or other regulations have eliminated or modified the data that has been used in the past for stock assessments. New survey or other data collection programs will need to be initiated soon to accumulate the necessary time series of information to measure change in these stocks.

The GAP supports the use of a Stock Assessment Review Panel approach for the review of rebuilding plans and further recommends one such panel conduct the review of all rebuilding plans on an annual basis. We feel the intense review that is required for these plans is so similar to the review of stock assessments that other Council committees (the Groundfish Management Team and Scientific and Statistical Committee) could not devote the time for a thorough review.

### **CANARY ROCKFISH REBUILDING PLAN DEVELOPMENT**

Dr. Rick Methot presented the draft canary rockfish rebuilding analysis to the GAP. The canary analysis applies only to the northern assessment, but the results are applicable coastwide. The draft analysis indicates coastwide catch should be reduced to zero for ten years in order to initiate the stock rebuilding, and catches would then increase gradually for a total of 54 years. The GAP recognizes catch cannot be reduced to zero without eliminating nearly all commercial and recreational fishing between about 20 fathoms and 150 fathoms. However, it appears from preliminary 2000 catch data that canary catch has already been reduced to a small fraction of the 1999 level. The GAP recommends the analysis be re-run assuming a low level of canary catch, and the Council should begin evaluating whether more restrictive measures would merely reduce landings but not actual catch, or cause the industry to forego revenues from other fisheries that take canary incidentally.

### **COWCOD REBUILDING PLAN DEVELOPMENT**

Dr. John Butler presented the draft cowcod rebuilding analysis to the GAP. The draft cowcod analysis indicates catch in the Conception area needs to be reduced to between about 500 pounds to a few thousand pounds per year. This would require elimination of all commercial and recreational fishing for this species. The GAP recommends the Council consider whether area closures could accomplish the rebuilding needs and perhaps hasten rebuilding compared to merely prohibiting all retention.

Needless to say, the GAP is greatly concerned about the impact of these rebuilding requirements on all groundfish fishers and the coastal communities along the entire West Coast.

### **DEFAULT MAXIMUM SUSTAINABLE YIELD FISHING RATE WITHIN THE HARVEST RATE POLICY**

The GAP continues to recommend, as it did in April, the new proposed rates be phased in to avoid significant adverse effects to the fishery. The phase-in can be accomplished for those species not under rebuilding plans by applying the new rates as new stock assessments are conducted. The GAP notes the calculations required to apply the new rates are nearly as extensive as those needed to perform an assessment.

For species under rebuilding plans, the GAP anticipates the rebuilding strategy will guide appropriate rates.

PFMC  
08/25/00



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

Pacific Fishery Management Council  
Red Lion Hotel Sacramento  
Sierra A Room  
1401 Arden Way  
Sacramento, CA 95815  
(916) 922-8041  
September 10-14, 2000

SUNDAY, SEPTEMBER 10, 2000 - 1 P.M.

**Call to Order**

Rod Moore, Chair

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

**Groundfish Management**

Agenda Overview

Jim Glock

G.10. Proposed Management Measures for 2001

Agendum Overview

Jim Glock

(**Council Action:** Adopt for Public Review)

MONDAY, SEPTEMBER 11, 2000 - 8 A.M.

**Groundfish Management (continued)**

(Continue G.10, if necessary)

G.2. Groundfish Strategic Plan

(**Council Action:** Consider Final Adoption of Plan)

G.11. Status of Fisheries and Inseason Adjustments

(**Council Action:** Consider Adjustments in Management Measures)

G.7. Sablefish Permit Stacking Concept

Jim Seger

(**Council Action:** Consider Adoption for Public Review)

**Marine Reserves**

B.1. Marine Reserves Phase I Considerations Report

(**Council Action:** Finding on Application as a Management Tool)

B.2. Marine Reserves Phase II Considerations

(**Council Action:** Decision If and How to Proceed with Marine Reserve Implementation)

**Habitat Issues**

C.2. Report of the Habitat Steering Group (HSG)

(**Council Action:** Consider HSG Recommendations)

MONDAY, SEPTEMBER 11, 2000 - 2:30 P.M.

**Presentation of the 2000 Stock Assessments, Star Panel Reports, etc.**



TUESDAY, SEPTEMBER 12, 2000 - 8 A.M.

***Groundfish Management (continued)***

- G.1. Status of Federal Groundfish Activities
- G.3. Exempted Fishing Permit Applications  
(**Council Action:** Recommendations to NMFS on Research and Other Exempted Fishing Permit Applications)
- G.4. Rebuilding Programs for Canary Rockfish and Cowcod  
(**Council Action:** Adopt for Public Review Draft and Public Hearing Schedule)
- G.5. New Stock Assessments for Lingcod and Pacific Ocean Perch  
(**Council Action:** Consider Rebuilding Plan and Season Adjustments)
- G.6. Preliminary Harvest Levels and Other Specifications for 2001  
(**Council Action:** Adopt Specifications for Public Review)
- G.8. Permit Transfer Regulations  
(**Council Action:** Initiate Process to Revise Permit Transfer Regulations)
- G.9. Stocks to be Assessed in 2001 and Agency Commitments  
(Council Discussion)

**Administrative and Other Matters**

- F.3. Proposed Change in Terms for Council Advisory Body Members  
(**Council Action:** Consider (1) appointing advisors for three rather than two-year terms, and (2) modifying the limit of no more than one alternate per year with no compensation for expenses)

WEDNESDAY, SEPTEMBER 13, 2000 - 8 A.M.<sup>1/</sup>

Review Draft Groundfish Advisory Subpanel Statements, Complete Unfinished Agenda Items

ADJOURN

PFGC  
08/25/00

---

1/ Meeting continues as necessary through Thursday, September 14, 2000.

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

Pacific Fishery Management Council  
Doubletree Hotel - Columbia River  
Umatilla Room  
1401 N Hayden Island Drive  
Portland, OR 97217  
June 26 - 28, 2000

**Call to Order**

The meeting was called to order at 8 A.M. by Chair Cynthia Thomson. Dr. Don McIsaac, Executive Director, provided some opening comments and noted for the Scientific and Statistical Committee (SSC) the key issues where the Council would look to the SSC for guidance: Default Harvest Rate Policy, Rebuilding Plans for Canary Rockfish and Cowcod, Amendment 9 to the Coastal Pelagic Species Fishery Management Plan, Pacific Mackerel Stock Assessment and Harvest Guideline, Research and Data Needs Document, and Process for Technical Review and Monitoring of Rebuilding Plans. Dr. McIsaac also noted that SSC input on the groundfish strategic plan and marine reserves documents would be important for the Council.

The agenda was approved.

**Members in Attendance**

Mr. Alan Byrne, Idaho Department of Fish and Game, Nampa, ID  
Dr. Ramon Conser, National Marine Fisheries Service, La Jolla, CA  
Dr. Robert Francis, University of Washington, Seattle, WA  
Dr. Susan Hanna, Oregon State University, Corvallis, OR  
Dr. Kevin Hill, California Department of Fish and Game, La Jolla, CA  
Mr. Tom Jagielo, Washington Department of Fish and Wildlife, Olympia, WA  
Dr. Gary Stauffer, National Marine Fisheries Service, Seattle, WA  
Dr. Gilbert Sylvia, Hatfield Marine Science Center, Newport, OR  
Ms. Cynthia Thomson, National Marine Fisheries Service, Santa Cruz, CA  
Dr. Shijie Zhou, Oregon Department of Fish and Wildlife, Portland, OR

**Members Absent**

Mr. Robert Conrad, Northwest Indian Fisheries Commission, Olympia, WA  
Dr. Peter Lawson, National Marine Fisheries Service, Newport, OR  
Dr. Stephen Ralston, National Marine Fisheries Service, Tiburon, CA  
Dr. Richard Young, Crescent City, CA

**Scientific and Statistical Committee Comments to the Council**

The following text contains SSC comments to the Council. (Related SSC discussion not included in written comment to the Council is provided in italicized text).

**Salmon Management**

Clarification of Methodological Bias

At the Council's April meeting, the SSC informed the Council it had received comment on possible biases in the new chinook Fishery Regulation Assessment Model (FRAM). During comment, three specific areas of concern were identified, and the SSC noted these areas in its report to the Council. The purpose of noting the specific areas of concern was to ensure that when the model is reviewed the concerns are evaluated. To this point, the SSC has not received enough information to evaluate whether or not the concerns are

warranted. In its comments to the Council, the SSC noted a review of the new model should include, but not be limited to, these items. The SSC is aware the Council deals regularly with issues of both the actual performance of scientific models and the public perception of the performance of the models. The SSC's comments were intended to ensure both these aspects of model performance are addressed.

### Salmon Methodology Reviews

During the April 2000 Council meeting, the SSC identified a list of harvest and abundance predictor models for potential review. The SSC is prepared to begin reviewing models this fall, as prioritized by the Council. The documentation of the models selected for initial review should be received by September 29, 2000 to ensure the results of the review are available to the Council at the November 2000 meeting.

The Council sent a letter on June 2, 2000 to tribal, state, and federal agencies asking them to prioritize the preseason salmon abundance forecast methodologies for SSC review. The SSC encourages agencies to respond to this letter. The response from Mr. William Robinson, National Marine Fisheries Service (NMFS), contained the type of information requested by the Council.

### **Marine Reserves**

The SSC was briefed by Mr. Jim Seger of Council staff and Dr. Richard Parrish of the National Marine Fisheries Service on the Draft Phase I Technical Analysis Report "Marine Reserves to Supplement Management of West Coast Groundfish Resources" (Attachment C.1. a.).

The technical report is a conceptual evaluation of the potential role for marine reserves in West Coast fishery management. The authors have responded to many of the review comments and questions raised by the SSC in its September 1999 statement and have developed a comprehensive treatment of the issues surrounding marine reserves.

The report raises several important points about marine reserves and fishery management:

- There is a great deal of uncertainty about how marine reserves will contribute to West Coast fishery management.
- Because of this uncertainty, monitoring and evaluating the impact of marine reserves will be an important component of their use.
- The Council has authority to establish marine reserves for only those species managed under an FMP.
- The Council has direct control over fishing, but will have limited consultative authority over nonfishing factors that will affect the performance of marine reserves.

### **Council Action**

The SSC finds the objectives and options contained in the Phase I report, although very broad, are sufficient for a conceptual review. We recommend the Council adopt the report for public review. We also recommend the Council proceed to Phase II to analyze options.

### **Phase II – Considerations**

The SSC identified a number of additional issues that will be important to consider if the Council decides to proceed to Phase II. These issues pertain to the objectives and options for marine reserves and are presented as guidance to the authors of the analysis documents.

#### **1. Objectives**

- The objectives for marine reserves will determine their scale and the choice of regulations controlling their use. For example, reserves established to preserve unique areas of habitat will be smaller than those established to achieve stock rebuilding or broad ecosystem benefits for multiple species.

- To track progress toward meeting objectives, marine reserves will have to be monitored under controlled experimental conditions. Because marine reserves will not produce fishery-dependent data (catch and catch-at-age), fishery-independent surveys will have to be conducted in closed areas. If marine reserves are a significant component of a stock rebuilding plan, evaluation may be required at two-year intervals.
- Monitoring and evaluation will require enhanced data collection and additional staff time. The cost of funding these activities should be explicitly considered in the evaluation of management options. The environment of limited funding means that there will be tradeoffs between alternative actions, for example monitoring marine reserves versus enhanced data collection to support "status quo" activities such as stock assessments. The issue is where the biggest payoff is likely to be.

## 2. Development of Options

- Allocation issues need to be addressed explicitly when various options are developed and analyzed. The scale, siting, and rules governing marine reserves allocate fish and fishing opportunities among recreational and commercial fisheries, gear types, and fishing communities.
- The impact of marine reserves will not be measurable in the short term. The relatively rapid recovery rates observed for haddock and cod in New England should not be expected for West Coast rockfish, because the species have very different life histories. Marine reserves will require a long-term commitment of management, enforcement, and research.
- It is important to acknowledge marine reserves will not substitute for fishery regulations outside the reserve area. Additional fishing restrictions may be required outside the reserve area to prevent concentrations of fishing effort that could lead to localized depletions, habitat damage, and conflicts.
- Defining more specific objectives for marine reserves will help analysts conduct a comprehensive comparison of alternative designs, locations, and regulations. The analysis of options should specifically address the objectives and should include a comparison of the cost effectiveness of marine reserves versus alternative methods (including combinations of marine reserves and alternative methods) of achieving the objectives. Alternatives include other management tools as well as doing a better job at the "status quo."

## Groundfish Management

### Stock Assessment Priorities for 2001

Ms. Cyreis Schmitt, NMFS, presented a list of species proposed for stock assessment in 2001. The stocks proposed for assessment are: sablefish, shortspine thornyhead, black rockfish (south), silvergrey, Dover sole, and cabezon. Depending on available staff resources yelloweye and the "remaining" rockfishes complex may be assessed. The SSC views the assessment for sablefish, shortspine thornyhead, and Dover sole the most important. Given the information made available to the SSC, we were unable to rank the relative importance of the remaining five stocks. The SSC notes the scheduled 2001 assessment of arrowtooth, English sole, blackgill, chilipepper, longspine thornyhead, and shortbelly were postponed. The SSC recommends criteria be developed to select stocks for assessment and the assessment schedule be planned several years in advance. A longer lead time will allow agencies to prepare databases and collect information for the assessment. Useful assessment criteria the SSC discussed were: the stock's value to the fishery, a weak stock that may constrain fisheries in mixed stock fishery, and compelling evidence that a stock is in decline (or increase).

The SSC disagrees with the recommendation to delay the Pacific whiting assessment in 2002. The delay will prevent the Council from using the 2001 triennial survey results until it sets quotas for the 2003 fishery. The SSC recommends that the 2002 assessment begin when data from the 2001 triennial survey become available, so the Council can use the results when setting quotas for the 2002 fishery. In 1999, this accelerated schedule was compatible with the Canadian system allowing a joint assessment and review.

## Process for Technical Review and Monitoring of Rebuilding Plans

Ms. Cyreis Schmitt of NMFS briefed the SSC on a preliminary schedule and process for technical review and monitoring of groundfish stock rebuilding plans. Ms. Schmitt requested the SSC comment on proposed process and asked for further SSC contribution to development and implementation.

In reviewing the proposed schedule, the SSC suggested the timeline be modified to expedite preparation of rebuilding analyses soon after it is apparent a stock is in an overfished condition, rather than waiting for NMFS to declare the stock overfished the following January. It is probably not feasible to devote adequate time to rebuilding analyses during the regular one-week Stock Assessment Review (STAR) Panel review of the stock assessment. In order to maintain the momentum of the modeling process, the Council should direct Stock Assessment Teams (STAT) teams to draft rebuilding analyses immediately following completion of the assessments (i.e., mid to late summer) for review at the September Council meeting. The Council should direct the Terms of Reference be modified to reflect this procedure.

The SSC will take lead responsibility for modifying the STAT/STAR Terms of Reference to include guidance for rebuilding plans. The revised documents will include methodological standards (parameters, analyses, and uncertainties), triggers for future full assessment, an outline for the document, and schedule for completion. The SSC's Groundfish Subcommittee will begin drafting the Terms of Reference after the September 2000 meeting for review at the March 2001 Council meeting.

This year, and potentially next year, the SSC should plan to provide review of draft rebuilding analyses. For the long term, the Council should consider whether to incorporate review of rebuilding analyses into the current STAR process or to develop an alternative review process. One such alternative could include a separate panel dedicated to review of all rebuilding analyses in any given year. This may allow for more standardized treatment of the process, avoiding potential implementation delays due to technical errors or other inadequacies. Phase-in of the chosen review process could potentially begin as early as March 2001, but Council scheduling and staff availability must also be considered. We would anticipate, under any review process, drafting of the full rebuilding plan would follow the overfishing declaration by NMFS in January.

Once a stock is in rebuilding mode, the rebuilding process can be monitored using a combination of annual stock assessment and fishery evaluation (SAFE) document updates on recent catch and biological data, in combination with full stock assessments conducted at three year intervals. The SSC suggests annual SAFE reports include a thorough description of any new data collection efforts, data improvements, and research and data needs.

## Default Maximum Sustainable Yield (MSY) Fishing Rate within the Harvest Rate Policy

The SSC reviewed the Groundfish Harvest Rate Policy Workshop Report (Attachment D.13.a.). The report (1) summarizes the scientific and management background of the harvest proxy issue, (2) explains some areas of common confusion, and (3) recommends default, risk-neutral proxies for  $F_{MSY}$ . The SSC fully agrees with the findings and recommendations of the Report, and recommends that the Council adopt the following risk-neutral proxies of  $F_{MSY}$ :

Sebastes and Sebastolobus	F50%
Pacific whiting	F40%
Flatfishes	F40%
Other groundfish	F45%
"Remaining Rockfish"	0.75 M

In addition, the SSC prepared a report, Supplemental SSC Report D.13.(2)., that summarizes the workshop's findings, discusses the findings with respect to precautionary management, and provides some implementation recommendations to the Council. This SSC report, designed to complement the workshop report, also addresses the Council's request for clarification on where and when precautionary adjustments are made in the stock assessment/management process as well as background information for many of the Council's questions to the SSC regarding  $F_{MSY}$  harvest rate considerations.

The Council's specific questions (Attachment D.13.b.) are addressed below:

1. *Does the SSC agree with the findings/recommendations of the Panel?*

The SSC fully agrees with the findings and recommendations of the Panel.

■ *Does the SSC agree with the point estimates of  $F_{MSY}$ ?*

Yes. However, it is important to keep in mind these are not point estimates of  $F_{MSY}$  for a single species, but rather proxies for species groups. See SSC Report for more detail.

■ *Are these estimated values risk-neutral (e.g., is there an equal probability that the true value is above or below the point estimate)?*

Yes. The terms of reference for the Panel specifically called for the Panel to develop risk-neutral proxies for species categories.

■ *Can one quantitatively describe the variability and uncertainty distribution around the point estimates? If so, please describe.*

No, as described above, these are not point estimates in the statistical sense for a particular species (i.e., they are not accompanied by formal statistical distributions and error bars). However, the workshop Panel and the SSC have recommended that for the relatively data-rich stock assessments,  $F_{MSY}$  estimates be derived as a part of the assessment instead of using proxies. The Council should expect to see such statistical estimates in the near future, accompanied by quantitative measures of variability and uncertainty.

2. *How should the recommendations be implemented?*

The SSC recognizes the implementation difficulties involved in constructing management measures that conform to the new  $F_{MSY}$  proxies. The SSC suggests it may be reasonable to implement the new proxies for some stocks immediately while delaying implementation for others. The following criteria is suggested:

- Stocks for which current spawning stock biomass (SSB) is less than B40%: implement now (i.e., Option 2a as described in Attachment D.13.b.).
- Stocks for which current SSB is greater than or equal to B40%: implement after the next stock assessment (i.e., Option 2c as described in Attachment D.13.b.)

3. *What precautionary adjustments have already been taken and what are additional quantitatively-based options?*

■ *What precautionary adjustments are already taken in the management process?*

All components of the stock assessment process are designed to be risk-neutral (i.e., no precautionary adjustments are made during the process of estimating current stock size, fishing mortality rates, etc.) (see STAR Panel and STAT Team terms of reference). The Council's determination of acceptable biological catch (ABC) is also risk-neutral. Some aspects of the precautionary approach are incorporated into the Council's optimum yield (OY) determination, e.g., application of the "40-10" control rule. Other aspects of the precautionary approach, involving additional precautionary adjustment when uncertainty is large, are not generally a part of Council management, but may be in the future (see Supplemental SSC Report D.13.(2)., page 3 for suggestions on moving the process in this direction).

- *In the third paragraph of the attached April SSC statement, two reasons are cited to warrant precaution in applying target  $F$  values for the fishery. For number 1, is there information on the range of average productivity for species within any complex managed by the Council? For number 2, can the chance of exceeding, and conversely not reaching, the true  $F_{MSY}$  be quantitatively or qualitatively be assessed?*

The paragraph referenced from the April SSC statement was only intended to clarify for the Council that the Workshop Panel's  $F_{MSY}$  proxies were risk-neutral, and did not reflect any precautionary adjustment. The Council's questions, immediately above, are addressed under Item 1 on page 2 of this report.

#### 4. *Definitions of key words related to default harvest rates.*

See the glossary in Appendix C of Supplemental SSC Report D.13.(2).

#### Canary Rockfish Rebuilding Plan Development

Dr. Richard Methot of NMFS presented preliminary findings from a working report which estimates rebuilding rates for canary rockfish in the northern area (Columbia and U.S. Vancouver International North Pacific Fishery Commission areas). The SSC provided Dr. Methot with suggestions we would like to see incorporated in the analysis when we re-evaluate it in September. Although the current analysis is preliminary, it is, nevertheless, clear that rebuilding will take decades, even if catches are negligible.

#### Cowcod Rebuilding Plan Development

The SSC reviewed a draft cowcod rebuilding analysis prepared by Dr. John Butler of NMFS and Mr. Tom Barnes of the California Department of Fish and Game (CDFG). The SSC provided advice to the authors regarding changes to the analysis that we would like to see in September. The current draft analysis indicates rebuilding will take many decades, even with very small catches.

#### Strategic Plan

Ms. Debra Nudelman briefed the SSC on the draft groundfish strategic plan. SSC members also attended the Ad-Hoc Groundfish Strategic Plan Development Committee's public briefing on Tuesday evening.

In the evening session, Ms. Nudelman indicated "the purpose of the strategic plan is to guide the future management of the groundfish fishery, including the development of plan amendments, regulations and other actions as needed." The SSC recommends this critical point appear in both the Executive Summary and the introductory section of the plan. In addition, to highlight the importance of maintaining this explicit linkage between the strategic plan and future groundfish management actions, the SSC recommends an additional bullet be added to the section of the plan entitled "Strategic Plan Goals for Council Process" (page 16 of the Executive Summary and page 66 of the Draft Strategic Plan), as follows:

"To ensure all plan amendments, regulations, and other management actions considered by the Council are routinely evaluated in terms of progress toward achieving the Strategic Plan."

The draft strategic plan is a thoughtful and well-written document. It provides explicit goals and includes a comprehensive range of issues and strategies for groundfish management. In terms of scope and general content, the SSC considers the document to be ready for public review. The Ad-Hoc Groundfish Strategic Plan Development Committee indicated in the evening session it will be soliciting additional input regarding the plan from Council advisory committees, as well as the public, this summer. The SSC intends to provide more detailed comments regarding the plan within that time frame.

## **Council Administrative Matters**

### Research and Data Needs Document

*This item was delayed until the November meeting.*

## **Coastal Pelagic Species Management**

### Pacific Mackerel Harvest Guideline and Other Specifications for 2001

Dr. Kevin Hill of CDFG presented the SSC with a summary of the status of the Pacific mackerel resource in 1999 and recommendations for the fishery in 2000-2001.

Evidence from model estimates of biomass indicate the population is in a downward trend. Recruitments have been low for nearly 20 years, and the downward trend in abundance is expected to continue as long as present environmental conditions persist. Harvest guidelines (HGs) were derived from a formula specified in the coastal pelagic species (CPS) fishery management plan. If the formula performs as expected, the HG will allow for stock rebuilding, depending on environmental conditions. Based on our summary review, the SSC supports the Coastal Pelagic Species Management Team's (CPSMT) recommendation regarding the 2000-2001 HG.

The SSC also discussed the utility of establishing a formal outside review process for CPS stock assessments. The SSC recommends the agencies and CPSMT consider developing a set of options that describe how such a review process could be implemented. The process would not necessarily need to be modeled after the relatively intensive STAR Panel process used for groundfish. The process might, for example, involve the periodic assembly of an outside review panel to review modeling procedures for multiple CPS species at the same time, rather than an annual stock assessment review cycle.

### Status of CPS Fishery Management Plan (FMP) Amendments for Bycatch and Market Squid MSY, Acceptable Biological Catch, and Tribal Fishing Rights

Mr. Jim Morgan of NMFS, Southwest Region, briefed the SSC on Amendment 9 to the Coastal Pelagic Species Fishery Management Plan. Ms. Marcie Yaremko of the CDFG provided the SSC with a detailed briefing on Section 5 of the amendment pertaining to ABC and MSY for market squid. The SSC discussion focused largely on Section 5.

In March 2000, the SSC recommended the CPSMT consider expanding the squid MSY proxy to reflect the presence of squid in unfished spawning areas. At this meeting, the SSC was provided with a number of MSY proxy options that incorporate this expansion. The geographic expansion was based on a number of assumptions (e.g., equal productivity among block areas, limited geographic migration of squid) that the SSC could not definitively evaluate on the basis of available information. In March 2000, the SSC also supported the CPSMT's recommendation to set ABC equal to MSY. The SSC's March recommendations regarding geographic expansion of the MSY proxy and setting ABC equal to MSY both presumed the existence of management controls such as squid refugia areas. The SSC recommends the CPSMT include information regarding existing squid management measures (including refugia areas) in the current draft document before it goes out for public review.

In addition to the ABC=MSY option, Amendment 9 includes three other options that involve setting ABC less than the MSY proxy. Because squid are short-lived and highly variable in abundance from one year to the next, the SSC does not consider it appropriate to base annual ABC on MSY. However, the SSC understands the need for the CPSMT to do this to meet regulatory requirements.

The CPSMT has made a credible effort to deal with the information and regulatory constraints that it faced in addressing issues related to MSY and ABC. The SSC considers Amendment 9 to include a reasonable range of ABC and MSY options for public review.



## Administrative and Other Matters

### Review of Halibut Bycatch Estimates

The SSC at the June meeting reviewed the work in progress being developed by NMFS, Northwest Fisheries Science Center (NWFS) to develop meaningful strata for a new estimator of halibut bycatch mortality estimate for International Pacific Halibut Commission (IPHC) management area 2C. This new estimator will use halibut interception rates for the bottom trawl fishery from the new database generated by the new Oregon observer project. The estimator will be modeled after the model developed by Pikitch et al. (1998). Mr. John Wallace and Ms. Cyreis Schmitt from FRAM/NWFS presented their results of their stratification evaluation using data from the Oregon observer data and the Enhanced Data Cooperative Program. The following comments attempt to summarize the SSC discussion with Mr. Wallace and Ms. Schmitt for their consideration.

The purposes of updating the estimates of halibut bycatch interception rates is two fold. First, an updated estimate of halibut bycatch mortality using the most recent changes in the amount effort resulting from the reductions in ABCs, trip limits, and limited entry permits is needed for the management and quota setting by IPHC for halibut in Area 2A using the new interception rates from the Oregon observer program. Second, a comparison is needed of interception rates from the mid-1980s updated for changes in halibut densities using the NMFS triennial bottom trawl survey with the rates estimated from the new observer data. This later is important for evaluating the mortality estimates for the years in the early to mid-1990s. It would be nice to have the new observer data stratified also by the same categories as the Pikitch analysis so that direct comparison can be made for the two data sets as modified by the results of the triennial survey.

With respect to the new strata definitions, SSC members expressed the follow thoughts:

- Latitudinal strata boundaries seem appropriate. One idea would be to further collapse the data into few latitudinal strata by combining the two northern areas or the 2 areas between 42.6 and 47.6 deg. The first option would approximately double the sample size in the northern strata. A second idea would be to end the southern boundary at the Oregon/California border. The concern here is whether the California trawl effort data will be available in time for updating the bycatch mortality by the time the report is to delivered to the Commission. This problem will also result in an underestimate of the total effort for the southern Oregon coast at least. The potential bias though should be small given the low density of halibut in these southern areas.
- Depth strata boundaries. The 100 fathom boundary may be too shallow based on the data in Figure 5. A better value might be more like 120 fathoms. The main disadvantage of this is that the 100 fathom curve is a pretty good proxy for the demarcation of shelf and slope.
- Seasonal strata boundaries are supported by the data. It is surprising that the interception rates for January thru March have a similar magnitude as the summer months. Halibut are suppose to be undergoing spawning on more northerly spawning beds at that time. Would the winter interceptions be primarily juvenile halibut or is there spawning taking place off Oregon and Washington?
- Stratification on arrowtooth flounder catch rates could be problematic for year previous to the Oregon observer sampling and future years. The catch of arrowtooth flounder is likely correlated with halibut, because of the strongly overlapping distribution during the non-spawning months and because their highest densities coincide off the northern Washington Coast. The Pikitch analysis stratified by 3 or 4 fishing strategies. The arrowtooth strata and the depth strata replace the Pikitch strategies strata. The concern is will the relationship hold into the future or apply to the past. What happens to the correlation if arrowtooth densities change differently than halibut densities? Do arrowtooth have the same inshore distribution as halibut? Can the arrowtooth strata be dropped for areas off Oregon? Again the concern is too many strata result in too small of a sample size per cell so that distribution of halibut interception rates are highly skewed resulting in asymmetrical confidence intervals.

- *Whatever strata categories are selected, they must (obviously) be coordinated with Mr. Mark Saelens of ODFW so that his summaries of trawl effort are consistent with your strata.*

#### **Public Comment**

Dr. Joshua Sladek-Nowlis, Center for Marine Conservation, testified about the CPSMT approach for determining an MSY proxy and ABC for market squid. He provided an alternative means to determine MSY and ABC.

#### **Adjournment**

The SSC adjourned at approximately 3:30 P.M., Wednesday, June 28, 2000.

PFMC  
08/25/00



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

Pacific Fishery Management Council  
Red Lion Hotel Sacramento  
Sierra B  
1401 Arden Way  
Sacramento, CA 95815  
(916) 922-8041  
September 11-13, 2000

MONDAY, SEPTEMBER 11, 2000 - 8 A.M.

**A. Call to Order and Scientific and Statistical Committee (SSC) Administrative Matters**

1. Report of the Executive Director Don McIsaac
2. Approve Agenda
3. Approve June 2000 Minutes
4. Open Discussion

A suggestion for the amount of time each agenda item should take is provided in the agenda. At the time the agenda is approved, priorities can be set and these times revised. Discussion leaders should determine whether more or less time is required and request an amendment to the agenda as needed.

Committee member work assignments are noted in parentheses at the end of each agenda item. The first name listed is the discussion leader and the second the rapporteur.

**D. Pacific Halibut Management**

2. Status of Bycatch Estimate Cyreis Schmitt  
(8:30 A.M., 1 hour; Stauffer, Ralston)  
➤ Council Action: Guidance

**A. SSC Administrative Matters (continued)**

5. Groundfish Fishery Discard Analysis Rick Methot  
(9:30 A.M., 1 hour)

**F. Administrative and Other Matters**

1. Research and Data Needs Jim Seger  
(10:30 A.M., 2 hours; Thomson)  
➤ Council Action: Preliminary Adoption

LUNCH

**G. Groundfish Management**

7. Sablefish Permit Stacking Concept Jim Seger  
(1:30 P.M., 1 hour; Hanna, Sylvia)  
➤ Council Action: Consider Adoption for Public Review

BRIEFING ON GROUND FISH STOCK ASSESSMENTS

2:30 P.M.  
Sierra A Room

**E. Salmon Management**

2. Preliminary Report of the Oregon Coastal Natural Coho Work Group Sam Sharr  
(2:30 P.M., 1 hour; Zhou, Lawson)
  - *Council Action: Discussion and Guidance on Development of Final Report*

**A. SSC Administrative Matters (continued)**

**CLOSED SESSION**

3:30 P.M.

6. Review Nominations for Coastal Pelagic Species Management Team and Salmon Technical Team

**GENERAL SESSION**

4 P.M.

PUBLIC COMMENT PERIOD

4 P.M.

Public comments on fishery issues not on the agenda are accepted at this time.

7. STAR Panel Process Ray Conser  
(4 P.M., .5 hours)
8. Review Statements D.2, E.2, F.1, and G.7  
(4:30 P.M.)

TUESDAY, SEPTEMBER 12, 2000 - 8 A.M.

**A. SSC Administrative Matters (continued)**

9. Finalize Statements D.2, E.2, F.1, and G.7  
(8 A.M., .5 hours)

**G. Groundfish Management (continued)**

4. Rebuilding Programs for Canary Rockfish and Cowcod Rick Methot/Tom Barnes  
(8:30 A.M., 1.5 hours; Jagielo, Byrne)
  - *Council Action: Adopt for Public Review*
5. New Stock Assessments for Lingcod and Pacific Ocean Perch Jim Glock  
(10 A.M., 1 hour; Conser, Hill)

➤ *Council Action: Consider Rebuilding Plan and Season Adjustments*

6. Preliminary Harvest Levels and Other Specifications for 2001 GMT  
(11 A.M., 1.5 hours; Ralston, Conrad)

➤ *Council Action: Adopt Specifications for Public Review*

LUNCH

**A. SSC Administrative Matters (continued)**

11. Review Statements G.4, G.5  
(1:30 P.M., .5 hours)

**I. Coastal Pelagic Species Management**

1. Coastal Pelagic Species FMP Amendment 9: Bycatch, Squid  
Maximum Sustainable Yield, Tribal Fishing Rights Kevin Hill  
(2 P.M., 1.5 hours; Francis, Young)

➤ *Council Action: Consider Final Adoption*

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

10. Rebuilding Information from Current Stock Assessments Ray Conser  
(3:30 P.M., 1 hour)

12. Finalize Statements G.4 and G.5; Review Statements G.6 and I.1  
(4:30 P.M.)

WEDNESDAY, SEPTEMBER 13, 2000 - 8 A.M.

SALMON TECHNICAL TEAM AND SSC JOINT WORKSHOP 8 A.M. Sierra B Room
---

ADJOURN

PFMC  
08/25/00

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

Pacific Fishery Management Council  
Red Lion Hotel Sacramento  
Oroville Room  
1401 Arden Way  
Sacramento, CA 95815  
(916) 922-8041  
September 11, 2000

MONDAY, SEPTEMBER 11, 2000 - 9 A.M.

**A. Call to Order** (9 a.m.)

Michele Robinson, Chair

1. Opening Remarks and Introductions
2. Approval of Habitat Steering Group (HSG) Agenda

**B. Review of Council Agenda** (9:15 a.m.-9:30 a.m.)

HSG

1. Identification of Habitat-Related Issues on Council Agenda

**C. Action Items** (9:30 a.m.-12 p.m.)

HSG

1. Review Draft Letter Re: Heceta Bank Research (9:30 a.m.-9:45 a.m.)  
(See attached HSG Action Form and Exhibit C.2, Heceta Banks Draft Letter 1)
2. Comment on Marine Reserve Report (9:45 a.m.-10:15 a.m.)
3. Comment on Groundfish Strategic Plan (10:15 a.m.-11:30 a.m.)  
(Habitat Section, Marine Reserve Section, Science and Data Collection Section  
of the revised Strategic Plan which was enclosed with the HSG mailing)
4. Comment on Research and Data Needs Document (11:30 a.m.-12 p.m.)  
(See Exhibit F.1)

**Lunch** (12 p.m.-1 p.m.)

**D. Informational Presentations** (1 p.m.-3 p.m.)

2. Kelp Management Issues (1 p.m.-2 p.m.)  
(See attached excerpt from MBNMS Report and Exhibit C.2, MBNMS Ex. Sum) Aaron King, Monterey Bay National Marine Sanctuary (MBNMS), and CDFG Rep.
3. Expansion of California Wildlife Habitat Relationship Database to Marine Estuarine Areas (2 p.m.-2:30 p.m.) Kevin Shaffer, CDFG
3. The Habitat Approach (2:30 p.m.-3 p.m.)  
(Implementing Section 7 of the Endangered Species Act for Salmon, see attached NMFS Report) Nora Berwick, NMFS

**Break**

**E. Updates** (3:10 p.m.-4:30 p.m.)

1. Klamath Flow Issues (15 min.) Michael Rode, CDFG
2. Update on NMFS Position on Klamath River Flow Issues (15 min.) Mark Helvey, NMFS
3. Update on San Francisco Airport Expansion (5 min.) Mark Helvey, NMFS

4. Update on Marine Habitat Classification Scheme (15 min.) Jennifer Bloeser, PMCC
5. Update on Technical Guidance for Salmon Essential Fish Habitat (15 min.) Nora Berwick, NMFS
6. Federal Columbia River Project System Biological Opinion (15 min.) Nora Berwick, NMFS

***F. Public Comment Period*** (4:30 p.m.)

Public

Comments of members of the public on issues not on the agenda.

**G. October Meeting Agenda (Portland)** (4:50 p.m.-5:00 p.m.)

HSG

***H. Report to the Council/Comment on Council Agenda Items*** (5 p.m.-5:30)

HSG

ADJOURN (5:30 p.m.)

PPMC

08/30/00



### 3.5.3 Invertebrate/Vertebrate Assemblages Associated with Kelp Forests

The kelp forests of the MBNMS provide habitat for a large variety of invertebrates, fishes, birds and mammals which are distributed among three different regions of the forests; the surface canopies, the midwater and the substrate (Foster and Schiel, 1985; Figure 5).

The holdfasts of giant kelp and mats of geniculate coralline algae provide microhabitats for an abundant and species rich association of invertebrates (Andrews, 1945; Foster and Schiel, 1985; Dearn, 1987). Andrews (1945) found approximately 23,000 individuals from nine invertebrate phyla residing in five giant kelp holdfasts collected from the Monterey and Carmel Bays, the most common of which were polychaetes, amphipods, decapods, gastropods and ophiuroids.

Outside the holdfasts, sponges, tunicates, anemones, cup corals and bryozoans are probably the most commonly occurring sessile animals within kelp forests (Foster and Schiel, 1985; Table 1). McLean (1962) observed 204 species of invertebrates living in a bull kelp forest along an exposed coast south of Carmel during 30 SCUBA dives. In addition to these bottom dwelling species, a large number of invertebrates, such as the isopod *Idotea resicata* and the bryozoan *Membranipora tuberculata* occur within the canopies, while diverse assemblage of

planktonic species such as jellyfish, crustaceans and fish larvae live in the water column of the kelp forests (Figure 5).

A wide variety of motile grazers, the majority of which do not remove entire kelp plants but graze upon their tissue and other associated algae (Foster and Schiel, 1985), also occur in the forests. Some species, such as sea urchins (*Strongylocentrotus franciscanus* and *S. purpuratus*), may completely remove entire kelp plants by grazing through their holdfasts (Pearse and Hines, 1979; Foster and Schiel, 1985; Kenner, 1992). Where urchin predators are present, sea urchins typically remain stationary in cryptic habitats and feed on detritus and macroalgal drift. (Ebeling et al., 1985; Foster and Schiel, 1985; Watanabe and Harrold, 1991). Other species, like the gastropods *Tegula spp.*, graze along the entire thallus of the kelp plants from the substrate to the surface (Watanabe, 1984). In addition to herbivores, several species of predatory sea stars, snails and crabs inhabit the kelp forests, but comparatively little is known about the dynamics of these organisms (Foster and Schiel, 1985).

Although they are not limited to kelp forests, a variety of fish occur within them, including many of economic importance. The commercial fisheries associated with kelp forest fishes are reviewed in Leet, Dewees and Haugen (1992). In addition to the commercial fisheries, a large sport fishery is associated with kelp forests, particularly with rockfish, *Sebastes spp.* (Karpov et al., 1995).

The heterogeneous environment of the forest provides an important source of food and shelter for many fish species (Foster and Schiel, 1985; Bodkin, 1988; Table 1). These can be categorized according to where they reside in the forest (Foster and Schiel, 1985). Midwater species of the kelp canopy, such as the senorita (*Oxyjulis californica*) and the surfperch (*Brachyistius frenatus*) browse on the small crustaceans associated with both the kelp fronds and canopies. Other midwater predatory fishes including the common plankton-feeding blue rockfish (*S. mystinus*), the blacksmith (*Chromus punctipinnus*) and juveniles of the predatory kelp rockfish (*S. atrovirens*), olive rockfish (*S. serranoides*) and black rockfish (*S. melanops*). Compared to southern California kelp forests, MBNMS kelp forests have relatively few tropically-derived fish species and even fewer families, but generally host more species per family (see Foster and Schiel (1985) for a review of kelp forest fishes).

Along the central California coast, fish diversity and abundance decrease in areas where the kelp canopies have been removed (Bodkin, 1988). In addition, mass mortality of kelp forest fishes, particularly *Sebastes spp.* have been observed as a result of large waves at the southern end of the MBNMS at San Simeon (Bodkin et al., 1987). Variations in fish abundance may have significant impacts on other communities. For example, juvenile rockfishes associated with kelp forests in Monterey Bay can reduce the amount of barnacle larvae reaching the intertidal to 2% of the level found in the absence of fish (Gaines and Roughgarden, 1988).

Harbor seals (*Phoca vitulina*) and California sea lions (*Zalophus californianus*) are common in and around MBNMS kelp forests. Harbor seals feed on shallow-dwelling kelp forest fishes, while California sea lions, which feed mainly on pelagic fishes, probably limit their use of the forests to transitory feeding (Foster and Schiel, 1985). Gray whales (*Eschrichtius robustus*) have been observed entering kelp forests to escape predation from killer whales (*Orcinus orca*, Baldrige, 1972) and also to feed on invertebrates such as midwater crustacean swarms (Nerini, 1984).

Sea otters (*Enhydra lutris*) are one of the most recognizable marine mammals associated with the kelp forests in the MBNMS. The current California sea otter population occupies a linear coastal range of about 280 km in central California. Most of the population occurs within the boundaries of the MBNMS. Sea otters feed on invertebrates, many of which are associated with kelp forests (Foster and Schiel, 1985 and 1988; Estes et al., 1986), and must consume 25% of their body weight per day to meet their energy needs (Costa, 1978). Otters also use kelp forests as a refuge from predation by white sharks and winter storms, and as nursery areas for females with pups (Foster and Schiel, 1985).

Sea otters can have significant impacts on sea urchin populations, which in turn may affect the kelp forests themselves (Foster and Schiel, 1988). In this respect otters have been called a "keystone species," since they occur high in the food web and by controlling their prey species (sea urchins), they greatly alter the community as a whole (Estes and Palmisano, 1974; Estes and Duggins, 1995). As background, Keystone species concept (Paine, 1969) are defined as have cascading effects disproportionate to their abundance (Chris Harrold, pers. comm.). While the "keystone species" concept is academically debatable for sea otters (Foster et al., 1988; Foster 1990; Riedman and Estes, 1990), the effect of sea otters on a kelp forest is probably significant

A wide variety of birds use MBNMS kelp forests although their relationship with the forests is poorly known (Table 1). Foster and Schiel (1985) report that kelp provides three distinct habitats used by birds: the kelp forest made up of living attached plants associated with rocky substrata, drift kelp floating in the open sea, and the kelp wrack, i.e. detached kelp deposited on the beach by water motion. Kelp forests provide a large potential source of invertebrate and fish prey as well as a refuge from storms. Birds commonly observed in this habitat are gulls, terns, snowy egrets, great blue herons and cormorants (Foster and Schiel, 1985). Birds associated with drift kelp, like phalaropes, feed on the associated plankton and larvae. The kelp wrack provides an important food source and habitat for kelp flies, maggots and small crustaceans on which several species of shore birds, starlings, common crows, black phoebes and warblers feed (Davis and Baldrige, 1980).

#### 3.5.4 Seasonal Patterns and Kelp Life Histories

The seasonal patterns in the kelp forests of central California are very different from those observed in southern California. In central California, giant kelp and bull kelp exhibit their greatest recruitment in the spring and maximum canopies in early fall (Foster, 1982a) while kelp canopies in southern California reach their maximum in the winter. Recruitment of giant kelp sporophytes in southern California is greatest during periods of low temperatures and high nutrients, called "recruitment windows" (Deysher and Dean, 1986). These conditions are nearly continuous in central California but are particularly evident during spring upwelling (McLean, 1962; Breaker and Broenkow, 1994) when light is also high because of canopy thinning by winter storms. These new kelp sporophytes grow from the substrate to the surface where they are supported by gas-filled bladders called pneumatocysts, and may form very dense surface canopies.

Although individual giant kelp plants can live up to seven years (Rosenthal et al., 1974), plants in central California may be shorter lived because they are removed during periods of high water motion associated with winter storms (McLean, 1962;

Foster, 1982a; Reed and Foster, 1984; Harrold et al., 1988). During these periods, giant kelp survivorship is positively correlated with the hardness of the substrate to which the plants are attached (Foster and Schiel, 1985). Another major source of kelp mortality along central California has been grazing by sea urchins (*Strongylocentrotus spp.*) (Pearse and Hines 1979, Watanabe and Harrold, 1991). The effect of urchins however, has decreased due to predation by the sea otter *Enhydra lutris* (McLean, 1962; Kenner, 1992; Watanabe and Harrold, 1991).

Although much is known about growth and survivorship of adult kelp sporophytes, relatively little is known about the ecology of their microscopic stages. These stages are probably highly vulnerable to grazing (Leonard, 1994) and sedimentation (Devinny and Vorse, 1978; Deysher and Dean, 1986) such as that from sewage discharges, which may thus be important in determining the distribution of kelp forests within the Sanctuary (see also Meistrell and Montagne 1992). Studies on microscopic stages of giant kelp suggest they are also sensitive to the toxins associated with municipal and industrial waste discharges. For example, growth and fertility are reduced when gametophytes are exposed to elevated copper concentrations in discharge effluent (Anderson et al., 1990; see also Foster et al., 1983 for a review).

#### 3.5.5 Marine Ecological Changes Near the Monterey Peninsula (prepared entirely by MBNMS Staff)

Ecologically, the area of the Monterey Peninsula has undergone numerous changes since recorded history. The sea otter, which once populated the area, was eliminated from the habitat by man before the beginning of the Twentieth Century. Sea otters did not arrive back again on the Monterey Peninsula until the late 1950's (Riedman and Estes, 1990). Assuming sea otters do have a significant effect on the nearshore environment (Estes and Palmisano, 1974; Estes and Duggins, 1995), it is nearly impossible to predict what the Monterey Peninsula's nearshore "pristine" condition may have been like.

Historically large nearshore abalone and kelp harvesting industries have been supported off the Monterey Peninsula (Scofield, 1959; Cox, 1962; Donnellan and Foster, 1999). The nearshore area along Cannery Row was once predominantly a *Nereocystis* community until the 1960's (Donnellan and Foster, 1999). Also, the intertidal "torching" of the Peninsula's intertidal areas (Bonnot, 1931: See Below) for the red algae industry may have had significant effects, at least in the short term, on the intertidal ecosystem.

Nearshore development is assumed to pose the threat of significant impacts to the nearshore environment (Foster and Shiel, 1985; also, See Below Under Section 4.2.2). As one of the most heavily populated and developed areas of the California Central Coast, the onshore origins of issues (e.g., runoff, sewage, development) most certainly have an impact on the nearshore kelp forests.

For a more in-depth discussion of the ecology of kelp forests, see, "The Ecology of Giant Kelp Forests in California: A Community Profile" (Foster and Schiel, 1985), or the DFG Kelp Management Plan for the State of California (DFG, November 1995).

## **The Habitat Approach**

Implementation of Section 7 of the Endangered Species Act for  
Actions Affecting the Habitat of Pacific Anadromous Salmonids

Prepared by the National Marine Fisheries Service  
Northwest Region  
Habitat Conservation and Protected Resources Divisions  
26 August 1999

## I. PURPOSE

This document describes the analytic process and principles that the National Marine Fisheries Service (NMFS) Northwest Region (NWR) applies when conducting ESA § 7 consultations on actions affecting freshwater salmon<sup>6</sup> habitat.

## II. BACKGROUND

Section 7 of the Endangered Species Act<sup>7</sup> (ESA) requires Federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of their critical habitat.<sup>8</sup> Federal agencies must consult with National Marine Fisheries Service (NMFS) regarding the effects of their actions on certain listed species.<sup>9</sup> The NMFS evaluates the effects of proposed Federal actions on listed salmon by applying the standards of § 7(a)(2) of the ESA as interpreted through joint NMFS and U.S. Fish and Wildlife Service (FWS) regulations and policies.<sup>10</sup> When NMFS issues a biological opinion, it uses the best scientific and commercial data available to determine whether a proposed Federal action is likely to (1) jeopardize the continued existence of a listed species, or (2) destroy or adversely modify the designated critical habitat of a listed species.<sup>11</sup>

The Services' ESA implementing regulations define "jeopardize the continued existence of" to mean: "...to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species."<sup>12</sup> Section 7(a)(2)'s

---

<sup>6</sup> For purposes of brevity and clarity, this document will use the word "salmon" to mean all those anadromous salmonid fishes occurring in, and native to, Pacific Ocean drainages of the United States – including anadromous forms of cutthroat and steelhead trouts, and not including salmonids occurring in Atlantic Ocean and Great Lakes drainages.

<sup>7</sup> 16 USC §§ 1531 *et seq.*

<sup>8</sup> 16 USC § 1536(a)(2) (1988).

<sup>9</sup> A 1974 Memorandum of Understanding between NMFS and FWS establishes that NMFS retains ESA jurisdiction over fish species that spend a majority of their lives in the marine environment, including salmon. See Memorandum of Understanding Between the U.S. Fish and Wildlife Service, United States Department of Interior, and the National Oceanic and Atmospheric Administration, United States Department of Commerce, Regarding Jurisdictional Responsibilities and Listing Procedures under the Endangered Species Act of 1973 (1974).

<sup>10</sup> See U.S. Fish and Wildlife Service and National Marine Fisheries Service., *Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act*. U.S. Government Printing Office, Washington, D.C. (1998).

<sup>11</sup> 16 USC § 1536(a)(2) (1988).

<sup>12</sup> 50 CFR § 402.02 (1999).

requirement that Federal agencies avoid jeopardizing the continued existence of listed species is often referred to as the “jeopardy standard.”<sup>13</sup> The ESA likewise requires that Federal agencies refrain from adversely modifying designated critical habitat.<sup>14</sup> The Services’ ESA implementing regulations define the term “destruction or adverse modification” of critical habitat to mean:

... a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.<sup>15</sup>

A species is listed as endangered if it is in danger of extinction throughout all or a significant portion of its range.<sup>16</sup> A species is listed as threatened if it is likely to become endangered within the foreseeable future.<sup>17</sup> Listing a species under the ESA therefore reflects a concern for a species’ continued existence—the concern is immediate for endangered species and less immediate, but still real, for threatened species. The purpose of the ESA is to provide a means whereby the ecosystems upon which listed species depend may be conserved, such that the species no longer require the protections of the ESA and can be delisted.<sup>18</sup> This constitutes “recovery” under the ESA.<sup>19</sup> Recovery, then, represents a state in which there are no serious concerns for the survival of the species.<sup>20</sup>

Impeding a species’ progress toward recovery exposes it to additional risk, and so reduces its likelihood of survival. Therefore, in order for an action to not “appreciably reduce” the likelihood of survival, it must not prevent or appreciably delay recovery. Salmon survival in the wild depends upon the proper functioning of certain ecosystem processes, including habitat formation and maintenance. Restoring functional habitats depends largely on allowing natural processes to increase their ecological function, while at the same time removing adverse impacts

---

<sup>13</sup> See M.J. Bean and M.J. Rowland, *The Evolution of National Wildlife Law. Third Edition*. Praeger Publishers, Westport, Connecticut, pp. 240, 253 & 260 (1997).

<sup>14</sup> 16 USC § 15536(a)(2) (1988).

<sup>15</sup> 50 CFR § 402.02 (1999).

<sup>16</sup> 16 USC § 1532(6) (1988).

<sup>17</sup> 16 USC § 1532(20) (1988).

<sup>18</sup> See, e.g., 16 USC § 1532(3) (1988) (defining the term “conserve”); 16 USC § 1531 (b) (1988) (stating the purpose of the ESA).

<sup>19</sup> See, e.g., 16 USC § 1533(f)(1) (1988) (describing the purpose of recovery plans).

<sup>20</sup> NMFS, *Memorandum from R.S. Waples, NMFS, to the Record* (1997).

of current practices.<sup>21</sup> Along these lines, the courts have recognized that no bright line exists in the ESA regarding the concepts of survival and recovery.<sup>22</sup> Likewise, available scientific information concerning habitat processes and salmon population viability indicates no practical differences exist between the degree of function essential for long-term survival and that necessary to achieve recovery.<sup>23</sup>

### III. ORGANIZATION OF ENDANGERED SPECIES ACT § 7 ANALYSES

In conducting analyses of habitat-altering actions under § 7 of the ESA, NMFS uses the following steps: (1) Consider the status and biological requirements of the affected species; (2) evaluate the relevance of the environmental baseline in the action area to the species' current status; (3) determine the effects of the proposed or continuing action on the species; (4) consider cumulative effects; (5) determine whether the proposed action, in light of the above factors, is likely to appreciably reduce the likelihood of species survival in the wild or adversely modify its critical habitat. If jeopardy or adverse modification is found, NMFS must identify reasonable and prudent alternatives to the action if they exist.

The analytical framework described above is consistent with the Services' joint ESA § 7 Consultation Handbook<sup>24</sup> and builds upon the Handbook framework to better reflect the scientific and practical realities of salmon conservation and management on the West Coast. Below we describe this analytical framework in detail.

#### A. Describe the Affected Species' Status and Define its Biological Requirements.

##### 1. Identify the Affected Species and Describe its Status

The first step in conducting this analysis is to identify listed species, and when known, populations of listed species, that may be affected by the proposed action. Under the ESA, a taxonomic species may be defined as a "distinct population segment."<sup>25</sup> The NMFS has

---

<sup>21</sup> Stouder et al., *Pacific Salmon and Their Ecosystems: Status and Future Options*, Chapman and Hall, New York, New York (1997).

<sup>22</sup> *Idaho Department of Fish and Game v. NMFS*, 850 F.Supp. 886 (D. OR 1994) (discussing NMFS' biological opinion concerning the Federal Columbia River Hydropower System).

<sup>23</sup> See 51 Fed. Reg. 19,926 (1982). In the preamble to the § 7 consultation regulations, the Services recognized that in some cases, no distinction between survival and recovery may exist, stating "If survival is jeopardized, recovery is also jeopardized...it is difficult to draw clear-cut distinctions" [between survival and recovery].

<sup>24</sup> See FWS and NMFS, *supra* note 5.

<sup>25</sup> 16 USC § 1532(16) (1988).



established a policy that describes such “distinct population segments” as Evolutionarily Significant Units (ESUs).<sup>26</sup> An ESU is a population or group of populations that is substantially reproductively isolated from other conspecific populations and represents an important component in the evolutionary legacy of the species.<sup>27</sup> In implementing the ESA, NMFS has established ESUs as the listing unit for salmon under its jurisdiction. Therefore, for purposes of jeopardy determinations, NMFS considers whether a proposed action will jeopardize the continued existence of the affected ESU or adversely modify its critical habitat.<sup>28</sup>

When affected species and populations have been identified, NMFS considers the relative status of the listed species, as well as the status of populations in the action area. This may include parameters of abundance, distribution, and trends in both. Various sources of information exist to define species and population status. The final rule listing the species or designating its critical habitat is a good example of this type of information. Species’ status reviews and factors for decline reports may also provide relevant information for this section. When completed, recovery plans and associated reports will provide a basis for determining species status in the action area.

## 2. Define the Affected Species’ Biological Requirements

The listed species’ biological requirements may be described in a number of different ways. For example, they can be expressed in terms of population viability using such variables as a ratio of recruits to spawners, a survival rate for a given life stage (or set of life stages), a positive population trend, or a threshold population size. Biological requirements may also be described as the habitat conditions necessary to ensure the species’ continued existence (*i.e.*, functional habitats) and these can be expressed in terms of physical, chemical, and biological parameters. The manner in which these requirements are described varies according to the nature of the action under consultation and its likely effects on the species.

However species’ biological requirements are expressed—whether in terms of population variables or habitat components—it is important to remember that there is a strong causal link between the two: actions that affect habitat have the potential to affect population abundance, productivity, and diversity; these effects are particularly noticeable when populations are at low levels—as they are now in every listed ESU. The importance of this relationship is highlighted

---

<sup>26</sup> See 56 Fed. Reg. 58,618 (1991).

<sup>27</sup> R.S. Waples, *Definition of “Species” Under the Endangered Species Act: Application to Pacific Salmon*, National Marine Fisheries Service (1991).

<sup>28</sup> NMFS has recognized that in many cases ESUs contain a significant amount of genetic and life history diversity. Such diversity is represented by independent salmon populations that may inhabit river basins or major sub-basins within ESUs. In light of the importance of protecting the biological diversity represented by these populations, NMFS considers the effects of proposed actions on identifiable, independent salmon populations in judging whether a proposed action is likely to jeopardize the ESU as a whole.

by the fact that freshwater habitat degradation is identified as a factor of decline in every salmon listing on the West Coast.<sup>29</sup>

Habitat-altering actions continue to affect salmon population viability, frequently in a negative manner.<sup>30</sup> However, it is often difficult to quantify the effects of a given habitat action in terms of its impact on biological requirements for individual salmon (whether in the action area or outside of it). Thus it follows that while it is often possible to draw an accurate picture of a species' rangewide status—and in fact doing so is a critical consideration in any jeopardy analysis—it is difficult to determine how that status may be affected by a given habitat-altering action. Given the current state of the science, usually the best that can be done is to determine the effects an action has on a given habitat component and, since there is a direct relationship between habitat condition and population viability, extrapolate to the impacts on the species as a whole. Thus, by examining the effects a given action has on the habitat portion of a species' biological requirements, NMFS has a gauge of how that action will affect the population variables that constitute the rest of a species' biological requirements and, ultimately, how the action will affect the species' current and future health.

Ideally, reliable scientific information on a species' biological requirements would exist at both the population and the ESU levels, and effects on habitat should be readily quantifiable in terms of population impacts. In the absence of such information, NMFS' analyses must rely on generally applicable scientific research that one may reasonably extrapolate to the action area and to the population(s) in question. Therefore, for actions that affect freshwater habitat, NMFS usually defines the biological requirements in terms of a concept called properly functioning condition (PFC). Properly functioning condition is the sustained presence of natural<sup>31</sup> habitat-forming processes in a watershed (*e.g.*, riparian community succession, bedload transport, precipitation runoff pattern, channel migration) that are necessary for the long-term survival of the species through the full range of environmental variation. PFC, then, constitutes the habitat component of a species' biological requirements. The indicators of PFC vary between different landscapes based on unique physiographic and geologic features. For example, aquatic habitats

---

<sup>29</sup> See, *e.g.*, 57 Fed. Reg. 14,653 (April 22, 1992) (Snake River spring/summer and fall chinook); 62 Fed. Reg. 24,588 (May 6, 1997) (Southern Oregon/Northern California coho); 63 Fed. Reg. 13,347 (March 18, 1998) (Lower Columbia River and Central Valley steelhead).

<sup>30</sup> See NMFS, *Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (MPI) (1996).

<sup>31</sup> The word "natural" in this definition is not intended to imply "pristine," nor does the best available science lead us to believe that only pristine wilderness will support salmon. The best available science does lead us to believe that the level of habitat function necessary for the long-term survival of salmon (PFC) is most reliably and efficiently recovered and maintained by simply eliminating anthropogenic impairments, and does not usually require artificial restoration. See Rhodes et. al., *A Coarse Screening Process for Potential Application in ESA Consultations*. Columbia River Inter-Tribal Fish Commission, Portland, Oregon, pp. 59-61, (1994); National Research Council, *Upstream: Salmon and Society in the Pacific Northwest*. National Research Council, National Academy Press, Washington, D.C., p. 201 (1996).

on timberlands in glacial mountain valleys are controlled by natural processes operating at different scales and rates than are habitats on low-elevation coastal rivers.

In the PFC framework, baseline environmental conditions are described as “properly functioning,” “at risk,” or “not properly functioning.” If a proposed action would be likely to impair<sup>32</sup> properly functioning habitat, appreciably reduce the functioning of already impaired habitat, or retard the long-term progress of impaired habitat toward PFC, it will usually be found likely to jeopardize the continued existence of the species or adversely modify its critical habitat or both, depending upon the specific considerations of the analysis. Such considerations may include for example, the species’ status, the condition of the environmental baseline, the particular reasons for listing the species, any new threats that have arisen since listing, and the quality of the available information.

Since lotic<sup>33</sup> habitats are inherently dynamic, PFC is defined by the persistence of natural processes that maintain habitat productivity at a level sufficient to ensure long-term survival. Although the indicators used to assess functioning condition may entail instantaneous measurements, they are chosen, using the best available science, to detect the health of underlying processes, not static characteristics. “Best available science” advances through time; this advance allows PFC indicators to be refined, new threats to be assessed, and species status and trends to be better understood. The PFC concept includes a recognition that natural patterns of habitat disturbance will continue to occur. For example, floods, landslides, wind damage, and wildfires will result in spatial and temporal variability in habitat characteristics, as will anthropogenic perturbations.

B. Evaluate the Relevance of the Environmental Baseline in the Action Area to the Species’ Current Status.

The environmental baseline represents the current basal set of conditions to which the effects of the proposed or continuing action would be added. It “includes the past and present impacts of all Federal, State, or private activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early § 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process.”<sup>34</sup>

---

<sup>32</sup> In this document, to “impair” habitat means to reduce habitat condition to the extent that it does not fully support long-term salmon survival and therefore “impaired habitat” is that which does not perform that full support function. Note that “impair” and “impaired” are not intended to signify any and all reduction in habitat condition.

<sup>33</sup> Running water.

<sup>34</sup> See 50 CFR § 402.02 (1999) (definition of “effects of the action”). Action area is defined by the consultation regulations (50 CFR 402.02) as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.”

The environmental baseline does not include any future discretionary Federal activities (that have not yet undergone ESA consultation) in the action area. The species' current status is described in relation to the risks presented by the continuing effects of all previous actions and resource commitments that are not subject to further exercise of Federal discretion. For a new project, the environmental baseline consists of the conditions in the action area that exist before the proposed action begins. For an ongoing Federal action, those effects of the action resulting from past unalterable resource commitments are included in the baseline, and those effects that would be caused by the continuance of the proposed action are then analyzed for determination of effects.

The reason for determining the species' status under the environmental baseline (without the effects of the proposed or continuing action) is to better understand the relative significance of the effects of the action upon the species' likelihood of survival and chances for recovery. Thus if the species' status is poor and the baseline is degraded at the time of consultation, it is more likely that any additional adverse effects caused by the proposed or continuing action will be significant.

The implementing regulations specify that the environmental baseline of the area potentially affected by the proposed action should be used in making the jeopardy determination. Consequently, delineating the action area for the proposed or continuing action is one of the first steps in identifying the environmental baseline. For the lotic environs typical of salmon habitat-related consultations, a watershed or sub-basin geographic unit (and its downstream environs) is usually a logical action area designation. Most habitat effects are carried downstream readily, and many travel upstream as well (*e.g.*, channel downcutting). Moreover, watershed divides provide clear boundaries for analyzing the cumulative effects of multiple independent actions.<sup>35</sup>

#### C. Determine the Effects of the Action on the Species.

In this step of the analysis, NMFS examines the likely effects of the proposed action on the species and its habitat within the context of its current status and existing environmental baseline. The analysis also includes an analysis of both direct and indirect effects of the action. "Indirect effects" are those that are caused by the action and are later in time but are still reasonably certain to occur. They include effects on species or critical habitat of future activities that are induced by the action subject to consultation and that occur after the action is completed. The analysis also takes into account direct and indirect effects of actions that are interrelated or interdependent with the proposed action. "Interrelated actions" are those that are part of a larger action and depend on the larger action for their justification. "Interdependent actions" are those that have no independent utility apart from the action under consideration.

---

<sup>35</sup> National Research Council, *Upstream: Salmon and Society in the Pacific Northwest*. National Research Council, National Academy Press, Washington, D.C., pp. 34, 213 & 359 (1996).

NMFS may use either or both of two independent techniques in assessing the impact of a proposed action. First, NMFS may consider the impact in terms of how many listed salmon will be killed or injured during a particular life stage and gauge the effects of that take's effects on population size and viability. Alternatively, NMFS may consider the impact on the species' freshwater habitat requirements, such as water temperature, substrate composition, dissolved gas levels, structural elements, etc. This second technique is especially useful for habitat-related analyses because, while many cause and effect relationships between habitat quality and population viability are well known,<sup>36</sup> they do not lend themselves to meaningful quantification in terms of fish numbers. Consequently, while this second technique does not directly assess the effects of actions on population condition, it indirectly considers this issue by evaluating existing habitat conditions in light of habitat conditions known to be conducive to salmon conservation.

Though there is more than one valid analytical framework for determining effects, NMFS usually uses a matrix of pathways and indicators to determine whether proposed actions would further damage impaired habitat or retard the progress of impaired habitat toward properly functioning condition. For the purpose of guiding Federal action agencies in making effects determinations, NMFS has developed and distributed a document detailing this method.<sup>37</sup> This document is discussed in more detail below. The levels of effects, or effects determinations, are defined<sup>38</sup> as:

**“No effect.”** Literally no effect whatsoever. No probability of any effect. The action is determined to have “no effect” if there are no proposed or listed salmon and no proposed or designated critical habitat in the action area or downstream from it. This effects determination is the responsibility of the action agency to make and does not require NMFS review.

**“May affect, not likely to adversely affect.”** Insignificant, discountable, or beneficial effects. The effect level is determined to be “may affect, not likely to adversely affect” if the proposed action does not have the potential to hinder attainment of relevant properly functioning indicators and has a negligible (extremely low) probability of taking proposed or listed salmon or resulting in the destruction or adverse modification of their habitat. An insignificant effect relates to the size of the impact and should never reach

---

<sup>36</sup> See Spence et al., *An Ecosystem Approach to Salmonid Conservation*, ManTech Environmental Research Services Corporation, Corvallis, Oregon (1996).

<sup>37</sup> See NMFS, *Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (MPI) (1996).

<sup>38</sup> These definitions are adapted from those found in NMFS, *Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (MPI) (1996), and; U.S. Fish and Wildlife Service and National Marine Fisheries Service., *Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act*. U.S. Government Printing Office, Washington, D.C. (1998)

the scale where take occurs.<sup>39</sup> A “discountable effect” is defined as being so extremely unlikely to occur that a reasonable person cannot detect, measure, or evaluate it. This level of effect requires informal consultation, which consists of NMFS concurrence with the action agency’s determination.

**“May affect, likely to adversely affect.”** Some portion or aspect of the action has a greater than insignificant probability of having a detrimental effect upon individual organisms or habitat. Such detrimental effect may be direct or indirect, short- or long-term. The action is “likely to adversely affect” if it has the potential to hinder attainment of relevant properly functioning indicators, or if there is more than a negligible probability of taking proposed or listed salmon or resulting in the destruction or adverse modification of their habitat. This determination would apply when the overall effect of an action has short-term adverse effects even if the overall long-term effect is beneficial. In such instances, NMFS conducts a jeopardy analysis.

The above effects determinations are applicable to individual fish, including fry and embryos. The MPI should be applied at spatial scales appropriate to the proposed action so that its habitat effects on individuals are fully taken into account. For example, if any of the indicators in the MPI are thought to be degraded by the proposed action to the extent that take of an individual fish results, the action is determined to be “may affect, likely to adversely affect.” For actions that are likely to adversely affect, NMFS must conduct a jeopardy analysis and render a biological opinion resulting in one of the conclusions below:

**“Not likely to jeopardize” and/or “Not likely to result in the destruction or adverse modification of critical habitat.”** The action does not appreciably reduce the likelihood of species survival and recovery or result in the destruction or adverse modification of its critical habitat.

**“Likely to jeopardize” and/or “Likely to result in the destruction or adverse modification of critical habitat.”** The action appreciably reduces the likelihood of species survival and recovery or results in the destruction or adverse modification of its critical habitat.

D. Consider Cumulative Effects in the Action Area.

The ESA implementing regulations define “cumulative effects” as those effects caused by future projects and activities unrelated to the action under consideration (not including discretionary Federal actions) that are reasonably certain to occur within the action area.<sup>40</sup> Since all future

---

<sup>39</sup> “Take” means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in such conduct.” 16 USC §1532(19) (1988).

<sup>40</sup> 50 CFR § 402.02 (1999).

discretionary Federal actions will at some point be subject to § 7 consultation, their effects will be considered at that time and are not included in cumulative effects analysis.

E. Jeopardy Determinations.

In this step of the analysis, NMFS determines whether (a) the species can be expected to survive, with an adequate potential for recovery, under the effects of the proposed or continuing action, the environmental baseline and any cumulative effects; and (b) whether the action will appreciably diminish the value of critical habitat for both the survival and recovery of the species. In completing this step of the analysis, NMFS determines whether the action under consultation, together with all cumulative effects when added to the environmental baseline, is likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of critical habitat.

For the jeopardy determination, NMFS uses the consultation regulations and the MPI analysis method to determine whether actions would further degrade the environmental baseline or hinder attainment of PFC at a spatial scale relevant to the listed ESU. That is, because salmon ESUs typically consist of groups of populations that inhabit geographic areas ranging in size from less than ten to several thousand square miles (depending on the species), the analysis must be applied at a spatial resolution wherein the actual effects of the action upon the species can be determined.

The analysis takes into account the species' status because determining the impact upon a species' status is the essence of the jeopardy determination. Depending upon the specific considerations of the analysis, actions that are found likely to impair currently properly functioning habitat, appreciably reduce the functioning of already impaired habitat, or retard the long-term progress of impaired habitat towards PFC at the population or ESU scale will generally be determined likely to jeopardize the continued existence of listed salmon, adversely modify their critical habitat, or both. Specific considerations include whether habitat condition was an important factor for decline in the listing decision, changes in population or habitat conditions since listing, and any new information that has become available.

If NMFS anticipates take of listed salmon incidental to the proposed action, the biological opinion is accompanied by an incidental take statement with reasonable and prudent measures to minimize the impact of such take, and non-discretionary terms and conditions for implementing those measures. Discretionary conservation recommendations may also accompany the biological opinion to assist action agencies further the purposes of habitat and species conservation specified in §§ 7(a)(1) and 7(a)(2).

F. Identify reasonable and prudent alternatives to a proposed or continuing action that is likely to jeopardize the continued existence of the listed species.

If the proposed or continuing action is likely to jeopardize the listed species or destroy or adversely modify critical habitat, NMFS must identify reasonable and prudent alternatives that

comply with the requires of § 7(a)(2) and with the applicable regulations. The reasonable and prudent alternative must be consistent with the intended purpose of the action, consistent with the action agency's legal authority and jurisdiction, and technologically and economically feasible. At this stage of the consultation, NMFS will also indicate if it is unable to develop a reasonable and prudent alternative.

#### IV. APPLICATION TOOLS USEFUL IN CONDUCTING § 7 ANALYSES - THE MATRIX

As previously mentioned, NMFS has developed an analytic methodology to help determine the environmental effects a given action will have by describing an action's effects on PFC.<sup>41</sup> This document includes a *Matrix of Pathways and Indicators* (MPI; often called "The Matrix,") and a dichotomous key for making effects determinations based on the condition of the environmental baseline and the likely effects of a given project. The MPI helps the action agency and NMFS describe current freshwater habitat conditions, determine the factors limiting salmon production, and identify sensitive areas and any risks to PFC. This document only *helps* make effects determination, it does not describe jeopardy criteria per se.

The pathways for determining the effects of an action are represented as six conceptual groupings (e.g., water quality, channel condition, and dynamics) of 18 habitat condition indicators (e.g., temperature, width/depth ratio). Default indicator criteria<sup>42</sup> (mostly numeric, though some are narrative) are laid out for three levels of environmental baseline condition: properly functioning, at risk, and not properly functioning. The effects of the action upon each indicator is classified by whether it will restore, maintain, or degrade the indicator.

The MPI provides a consistent, but geographically adaptable, framework for effects determinations. The pathways and indicators, as well as the ranges of their associated criteria, are amenable to alteration through the process of watershed analysis. The MPI, and variations on it, are widely used in § 7 consultations. The MPI is also used in other venues to determine baseline conditions, identify properly functioning condition, and estimate the effects of individual management prescriptions. This assessment tool was developed for forestry activities. NMFS is working to adapt it for other types of land management, and for larger spatial and temporal scales.

---

<sup>41</sup> NMFS, *Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (MPI) (1996).

<sup>42</sup> The unmodified "matrix" uses ranges of values for indicators that are generally applicable between species and across the geographic distribution of salmon. The indicators can be, and have been, modified for more specific geographic and species applications.



For practical purposes, the MPI analysis must sometimes be applied to geographic areas smaller than a watershed or basin due to a proposed action's scope or geographic distribution. These circumstances necessarily reduce analytic accuracy because the processes essential to aquatic habitats extend continuously upslope and downslope, and may operate quite independently between drainages.<sup>43</sup> Such loss of analytic accuracy should typically be offset by more conservative management practices in order to achieve parity of risk with the watershed approach. Conversely, a watershed approach to habitat conservation provides greater analytic certainty, and hence more flexibility in management practices.

## V. CONCLUSION

The NMFS has followed regulations under sections 7 and 10 of the ESA to develop an analytical procedure used to consistently assess whether any proposed action would jeopardize or conserve federally protected species. There is a legacy of a more than a century of profound human alterations to the Pacific coast drainages inhabited by salmon.<sup>44</sup> The analytical tool described as the MPI enables proposed actions to be assessed in light of the species current status, the current conditions, and expected effects of the action. Proposed actions that fail to conserve fish and their habitats as initially proposed can be redesigned to avoid jeopardy and begin to restore watershed processes. Conservation of listed salmon will depend largely on the recovery of watershed processes that furnish their aquatic habitat.

---

<sup>43</sup> L. B. Leopold, *A View of the River*, Harvard University Press, Cambridge, Massachusetts, chapter 1 (1994).

<sup>44</sup> See Cone and Ridlington, *The Northwest Salmon Crisis, a Documentary History*. Oregon State University Press, Corvallis, Oregon, pp. 12-21 & 154-160 (1996); W. Nehlsen *et al.*, *Pacific Salmon at the Crossroads: Stocks at Risk from California, Oregon, Idaho, and Washington*, Fisheries, Vol.16(2), pp. 4-21 (1991).



**DRAFT SUMMARY MINUTES**  
**Highly Migratory Species Advisory Subpanel**

Pacific Fishery Management Council  
DoubleTree Hotel - Columbia River  
Umatilla Room  
1401 N Hayden Island Drive  
Portland, OR 92717  
(503) 283-2111  
June 29, 2000

**Subpanel members present:**

Mr. Jerry Bates, northern processor, Newport, OR  
Dr. Michael Domeier, private recreational, Oceanside, CA  
Mr. Pete Dupuy, commercial at-large, Tarzana, CA  
Mr. Peter Flournoy, chair, purse seine, San Diego, CA  
Mr. Douglas Fricke, commercial at-large, Hoquiam, WA  
Ms. Andy Oliver for Dr. Rod Fujita, public at-large, Oakland, CA  
Mr. Donald Hansen, charter boat, Dana Point, CA  
Mr. Wayne Heikkila, vice-chair, commercial troll, Eureka, CA  
Mr. Chuck Janisse, gillnet, Ventura, CA  
Ms. Marciel Klenk, public at-large, Napa, CA  
Mr. Steve Lassley, commercial at-large, Spring Valley, CA  
Ms. Cinda Shedore, commercial at-large, Siletz, OR

**Plan Development Team members present:**

Dr. Norm Bartoo, NMFS, La Jolla, CA  
Mr. Steve Croke, CDFG, Long Beach, CA  
Ms. Jean McCrae, ODFW, Newport, OR  
Ms. Michele Robinson, WDFW, Montesano, WA  
Dr. Dale Squires, NMFS, La Jolla, CA

**Members of the public and others present:**

Ms. Tana McHale, WFOA, AFRF, Sacramento, CA  
Ms. Kate Wing, NRDC, San Francisco, CA  
Mr. Carl Sbarounis, CAHS, Gardena, CA  
Mr. Jim Morgan, NMFS, Long Beach, CA  
Ms. Kathy Fosmark, Fishermen's Association of Moss Landing, Pebble Beach, CA  
Mr. Mark Cedergreen, Westport Charterboat Association, Westport, WA  
Ms. Patty Wolf, CDFG, Long Beach, CA  
Mr. Dan Waldeck, PFMC Staff, Portland, OR  
Mr. Mike Atterberry, Alaska Ocean Seafood, Anacortes, WA  
Dr. Vidar Wespestad, Lynnwood, WA  
Mr. David Jincks, MTC, Newport, OR  
Mr. Jim Fisher, Hammond, OR  
Ms. Sandy Fisher, Hammond, OR  
Mr. John Royal, chair, CPSAS  
Mr. Mark Powell, CMC, San Francisco, CA  
Mr. Larry Six, NMFS contractor, Portland, OR

## Reports

### 1. Highly Migratory Species Plan Development Team Meeting, June 5-6, 2000

Team co-chair Steve Crooke summarized the recent meeting of the Team. A brief written summary is provided in the Team's statement to the Council (Supplemental HMSPDT Report E.2, June 2000) or in the Team Meeting Summary on the Council website ([www.pcouncil.org](http://www.pcouncil.org)).

Subpanel members had questions and concerns about the cost/earnings data collection efforts planned this summer for the troll and driftnet fisheries. Michael Domeier was concerned that the recreational fishery appears to have been overlooked in terms of economic data collection. Team members noted that funds are sufficient only to collect information on the troll and driftnet fisheries at this time, but there is economic information already available on all aspects of the sport fisheries except for slip boats. Doug Fricke was concerned about the sampling intensity for the troll survey, particularly for smaller vessels. Dale Squires offered to provide information on the sampling scheme. Steve Lassley requested that harpoon boats be included in the survey.

### 2. Inter-American Tropical Tuna Commission (IATTC) Meetings

Chair Peter Flournoy referred members to the letter of June 21, 2000, from Svein Fougner to Council Chair Jim Lone summarizing actions taken by the IATTC at its annual meeting in San Jose, Costa Rica in June, and to the package of resolutions adopted by the IATTC. Of particular interest is the resolution requiring the establishment of a record of vessels authorized to fish in the Convention Area for species under the purview of the Commission. NMFS may decide to establish a permit program for U.S. vessels that fish in the area. Members expressed concern about duplication with the high seas license and the anticipated permit required by the future convention for the western and central Pacific area.

Andy Oliver noted the effort to establish a cap on purse seine capacity. No agreement has been reached yet. Work continues.

The IATTC sent a letter to the chair of the Multilateral High Level Conference on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific (MHLC) addressing the issue of the eastern boundary in the northern area. The IATTC expressed opposition to extension of the eastern boundary to cover the range of northern albacore tuna, as this would create a substantial area of overlap in the eastern Pacific with either the current IATTC Convention or the proposed new Convention, both of which include northern albacore.

### 3. MHLC, April 12-19, 2000

Wayne Heikkila summarized the recent meeting. The final negotiating session scheduled for Fiji in August will need to be relocated due to the unrest in Fiji.

### 4. 51st Annual Tuna Conference, May 22-25, 2000

Norm Bartoo described the kinds of papers presented at the Tuna Conference (mostly scientific) and referred interested individuals to the collection of abstracts of papers.

### 5. Western Pacific Fishery Management Council Developments

Chair Flournoy summarized recent developments in the Hawaii area, including regulations and laws addressing the landing of shark fins without carcasses (finning) and the area closure to reduce turtle bycatch in the longline fishery. A very recent court order enlarges the area closed to longline gear, requires 100% observe coverage, and restricts the number of longline sets.

Wayne Heikkila noted the need for similar limited entry programs in the Western Pacific and Pacific regions,

when and if the Pacific Council chooses to adopt a limited entry program for west coast-based vessels. Doug Fricke emphasized the need to be aware that many Washington boats went to Alaska that could come back to this region to fish for albacore, thereby increasing effort.

#### 6. U.S./Canada Albacore Treaty

Peter Flournoy stated that the Western Fishboat Owners' Association had requested the Department of State to consult with Canada on treaty issues such as catch reporting.

#### 7. Cetacean Take Reduction Team

Chuck Janisse reported on the recent meeting of the Take Reduction Team which makes recommendations on measures to reduce interaction of driftnets with protected species. The Team recommended continued use of pingers and the requirement to hang the net at least 36 feet below the surface, among others.

The Subpanel agreed that reports on recent developments should be on the agenda of all future meetings. The Chair will request written reports in advance of the meeting on all items.

### **Subpanel Report to Council**

#### 1. Species in the Management Unit

Michele Robinson of the Team summarized Appendix I of the Team Statement to the Council (Supplemental HMSPDT Report E.2, June 2000), which includes five options for including species in the management unit. The management unit consists of species which will be actively managed and for which estimates of MSY and definitions of overfishing are required. The Team's preferred option (option 1) includes albacore tuna, bigeye tuna, bluefin tuna, skipjack tuna, yellowfin tuna, striped marlin, swordfish, blue shark, bigeye thresher shark, common thresher shark, pelagic thresher shark and shortfin mako shark.

Michael Domeier stressed the need for two species lists, management unit species and associated species. The Team explained that they are still working on development of other species lists, including bycatch species, data collection species and prohibited species. These will be discussed at the July Team meeting. Dr. Domeier also recommended that dolphin (fish) need to be in the management unit. Dolphin are an important target species in the recreational fishery and are highly migratory. He stated that more dolphin are landed than striped marlin, and marlin are on the Team's preferred list.

Pete Dupuy moved that the Subpanel support option 1 with the addition of dolphin. Peter Flournoy spoke against the motion, because option 1 includes a number of species (sharks) for which a biologically-based MSY cannot be calculated (according to the Team report). Andy Oliver spoke in favor, stating that she thinks a reasonable MSY for sharks can be calculated with the available information. The vote was 5 yes and 6 no (chair voted to break the tie). The motion failed.

Peter Flournoy moved that the Subpanel support option 3, which includes species for which sufficient data exists to calculate a biologically-based MSY. (Option 3 removes the 3 thresher sharks species and mako shark in comparison to option 1). Andy Oliver opposed the motion; it eliminates targeted species. Michael Domeier also opposed, because it eliminates species which may be vulnerable to overfishing. By including these shark species, the onus will be put on NMFS to collect the necessary data. The vote was 5 yes, 4 no. The motion passed. It was agreed that Andy Oliver would draft a minority statement for inclusion in the Subpanel report.

#### 2. Bonito

The Subpanel agreed that bonito belongs in the FMP for Coastal Pelagic Species.

#### 3. Regulation Inconsistencies

Michele Robinson reviewed Appendix II of the Team statement, Status of State Regulations and Regulatory Options.

#### Recreational fishery:

- Licenses: The Subpanel agreed with the Team that the State of Washington should consider adding albacore tuna to its existing recreational fishing license with a catch record for data purposes.
- Seasons: The Subpanel agreed with the Team not to recommend changes.
- Bag Limits: Michael Domeier recommended a daily bag limit of 10 albacore be established to prevent waste. He also stated that the practice of trading fresh tuna for canned tuna should be prevented. Doug Fricke said that a bag limit of 10 in Washington would encourage more harvest and is not wanted by the charterboat fleet. The Subpanel recommended that the Team address these two issues.
- Possession Limits: The Subpanel agreed with the Team not to recommend changes.
- Minimum Size Limit: The Subpanel agreed with the Team not to recommend changes.
- Fishing Gear: The Subpanel agreed with the Team not to recommend changes.
- Prohibited Species: The Subpanel agreed with the Team recommendation that Oregon and Washington prohibit the take of white shark, but went further and recommended that Oregon and Washington also prohibit the taking of basking sharks. This would create consistent, coastwide regulations on prohibited species.
- Logbooks for Charterboats: The Subpanel disagreed with the Team recommendation that Oregon institute a voluntary logbook program, and instead recommended the Council instruct the Team to develop a standardized federal logbook program for the region.

#### Commercial fishery:

- Licenses: The Subpanel disagreed with the Team that no changes are needed, and recommended that the Council direct the Team to develop one federal license or permit which would apply to all HMS fisheries (commercial, charter, recreational, treaty Indian) wherever they occur.
- Seasons: Chuck Janisse recommended that the California swordfish seasonal restrictions be incorporated in the federal regulations, or that the FMP defer to the state regulations on this matter. The Subpanel agreed to defer this item until after the Team has addressed management options at its next meeting.
- Fishing Gear: Pete Dupuy presented a brief written proposal for a pelagic longline fishery in the EEZ. The proposal was stimulated by concerns over the driftnet fishery interactions with protected species. It provides a tool to address conservation and management concerns such as species selectivity. Jerry Bates noted that, as written, the proposal appears to preclude participation by Oregon boats. Steve Lassley recommended that harpoon boats also be allowed to participate. Andy Oliver said the proposal needs a lot of work. She is interested in performance standards for each gear and incentives to help reduce bycatch. She is not prepared to support the proposal at this time, but suggested the Team look at it. Michael Domeier stated that anglers will be concerned that this proposal will increase pressure on striped marlin.

A motion was made to ask the Council to direct the Team to consider longlines as an alternative gear type. The vote was 7 yes, 1 no, 1 abstain. The motion passed.

The Subpanel agreed that the Council should ask the Team to identify alternatives that would create greater consistency in west coast HMS license/permit regulations.

- **Prohibited Species:** The Subpanel agreed with the Team recommendation that Oregon and Washington prohibit the take of white shark, but went further and recommended that Oregon and Washington also prohibit the taking of basking sharks. This would create consistent, coastwide regulations on prohibited species.
- **Finning:** The Subpanel disagreed with the Team that no changes are needed and recommended that the Council instruct the Team to include a prohibition on finning (must land fins with whole carcass) in all alternatives developed (vote 7 yes, 1 no).
- **Far Offshore Fishery:** The Subpanel disagreed with the Team that no changes are needed and recommended that the Council instruct the Team to identify alternatives that would create greater consistency in license/permit regulations.
- **Experimental Fisheries:** The Subpanel disagreed with the Team that no changes are needed and recommended that the Council instruct the Team to include experimental fisheries as part of one or more management alternatives.

### 3. Management Objectives

Michele Robinson explained that the draft list of objectives in Appendix V of the Team statement were derived from the scoping document, other Pacific Council FMPs and the Atlantic HMS FMP. The objectives are a work in progress and Subpanel comments are invited.

The Subpanel offered some comments directly to the Team. Doug Fricke asked that some language be included that reflects historical participation in the fisheries. Marciel Klenk said that the objectives need to address adequate supply of fish at reasonable prices.

(The Team subsequently presented a revised list of objectives to the Council, which included suggestions from the Subpanel.)

### **FMP Schedule**

Steve Crooke stated that the current plan development schedule is Appendix IV of the Team statement. The Team is asking the Council to consider a delay of about five months to allow inclusion of new economic data in the analysis. The majority of the Subpanel supported the delay (vote 9 yes, 1 no).

### **Meeting Schedule**

The Subpanel discussed the timing of future meetings and agreed that meetings in conjunction with Council meetings are preferred. The Subpanel suggests the next meeting be held September 13 (1 to 6 p.m.) and September 14 (8 a.m. to 6 p.m.), assuming the Council addresses HMS on September 15.

### **Elections**

The Subpanel re-elected Peter Flournoy as chair and Wayne Heikkila as vice-chair for the year 2000.

### **Public Comment**

Ms. Kathy Fosmark, representing several driftnetters in Moss Landing, CA, spoke in favor of the longline proposal submitted by Pete Dupuy.

(The Subpanel recommendations to the Council are included in Supplemental HMSAS Report E.2, June 2000).





**PROPOSED AGENDA**  
**Highly Migratory Species Advisory Subpanel**

Pacific Fishery Management Council  
Red Lion Hotel Sacramento  
Klamath Room  
1401 Arden Way  
Sacramento, CA 95815  
(916) 922-8041  
September 11-12, 2000

MONDAY, SEPTEMBER 11, 2000 - 1 P.M.

**A. Call to Order**

Peter Flournoy

**B. Highly Migratory Species Advisory Subpanel (HMSAS)  
Meeting Procedures**

Larry Six

**C. Introductions of HMSAS Members and Other Attendees**

**D. Review, Amendment, and Approval of Agenda**

**E. Review and Approval of Minutes of June 29, 2000 HMSAS  
Meeting in Portland, Oregon**

**F. Discussion of Written Summaries of Developments** (Distributed  
Prior to Meeting<sup>1/</sup>)

1. Highly Migratory Species Plan Development Team (HMSPDT) Meeting  
July 17-20, 2000, La Jolla, California (see minutes provided by  
Mr. Larry Six)
2. Inter-American Tropical Tuna Commission (IATTC) Meeting On Capacity,  
July 2000, Panama
3. Multi-Lateral High Level Conference (MHLC) VII Meeting,  
August 28-September 6, 2000, Honolulu, Hawaii
4. Developments Western Pacific Fishery Management Council (WPFMC):  
Turtle Litigation, Coral Reef Closure, Northwestern Hawaiian  
Island Initiative
5. Developments North Pacific Fishery Management Council (NPFMC):  
Sea Lion Litigation
6. Developments Pacific Fishery Management Council (Council):  
Turtle Litigation and Endangered Species Act Notice of Intent to Sue
7. Pacific States Marine Fisheries Commission (PSMFC):  
Delay In Office of Management and Budget Clearance of Economic Survey
8. U.S. – Canada Albacore Treaty
9. March 9, 2000 Control Date – Public Comments Received

Svein Fougner

Wayne Heikkila

Peter Flournoy

Peter Flournoy

Chuck Janisse

Dale Squires  
Peter Flournoy

---

1/ At the June 29, 2000 HMSAS Meeting it was decided written summaries of developments would be distributed prior to the next HMSAS meeting in order to appraise everyone of recent relevant information in the most time efficient manner.

- G. Further Discussion of Biological Maximum Sustainable Yield (MSY) and Proxy MSY for Managed Species** David Au/Sue Smith/Chris Boggs
- H. Discussion of Species Vulnerability Index** Sue Smith/Michele Robinson
- I. Discussion of Fisheries Data Collection by California, Oregon, Washington, and PacFin and RecFin Databases**
- J. Longline Proposal and Discussion of Limited Entry, Capacity, and Limited Area Aspects<sup>2/</sup>** Pete Dupuy/Michael Domeier/Chuck Janisse
- TUESDAY, SEPTEMBER 12, 2000 - 8 AM**
- K. Shark Fin and Carcass Retention Proposal<sup>3/</sup>** Chuck Janisse/Doug Fricke
- L. Uniform Federal HMS License Proposal** Doug Fricke
- M. Sport/Recreational Bag Limits and High Grading** Bob Fletcher/Chuck Janisse
- N. Suggested Modifications To Highly Migratory Species Plan Development Team (HMSPDT) Draft Fishery Management Plan (FMP) Objectives<sup>4/</sup>** Chuck Janisse
- O. Performance Standards and Incentive Proposal (Preliminary Bycatch Discussion)**
- P. Recommendations to Council and NMFS on Implementation of Inter-American Tropical Tuna Commission (IATTC's) Eastern Tropical Pacific Vessel Registry for All Vessels Fishing for HMS** Svein Fougner
- Q. Review of HMSPDT Reports and Proposals<sup>5/</sup>**
- R. HMSPDT Work Schedule**
- S. HMSAS and HMSPDT Future Meeting Schedule**
- T. Funding for HMSAS**
- U. Proposed Change in Terms for Council Advisory Body Members**
- V. Review and Proposal to Council of HMS Research Needs For Fiscal Year 2001 Supplements and Fiscal Year 2002 Budget Proposals**

---

2/ It is anticipated HMSAS member Mr. Pete Dupuy will have a written proposal and will make a short presentation.

3/ It is anticipated Mr. Chuck Janisse and/or Mr. Doug Fricke will have a short written proposal.

4/ It is anticipated any members of the HMSAS who have suggestions for this agenda item will circulate their written proposals prior to the HMSAS meeting.

5/ Depending on the volume of what is produced by the HMSPDT, this item may be moved up on the agenda as either the last item on Monday or the first item on Tuesday morning to permit more time for drafting and distribution of the HMSAS Report.

**W. Public Comment<sup>6/</sup>**

Public comments may also be sent to:

Dr. Donald O. McIsaac, Executive Director, Pacific Fishery Management Council, 2130 SW Fifth Avenue, Suite 224, Portland, Oregon 97201, 503-326-6352 (telephone), 503-326-6831 (fax), or [pfmc.comments@noaa.gov](mailto:pfmc.comments@noaa.gov).

ADJOURN

PPMC  
08/25/00

---

6/ Public Comment will occur toward the end of Monday's session, before and/or after the lunch break on Tuesday, and toward the end of the Tuesday session depending upon demand.



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

Pacific Fishery Management Council  
Red Lion Hotel Sacramento  
Almanor Room  
1401 Arden Way  
Sacramento, CA 95815  
(916) 922-8041  
September 11, 2000

MONDAY, SEPTEMBER 11, 2000 - 2 P.M.

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

Jim Harp, Chair

**B. Executive Director Report**

Donald McIsaac

1. Meeting Site Selection for 2003
2. Status of Supplemental Funding
3. Status of 2000 Budget
4. Proposed 2001 Grant Submission

**C. Legislative Update**

Dave Hanson

**D. Status of Groundfish Strategic Plan Facilitation Contract**

Dave Hanson

**E. Other**

ADJOURN

PFMC  
08/30/00

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

Pacific Fishery Management Council  
Red Lion Hotel Sacramento  
Almanor Room  
1401 Arden Way  
Sacramento, CA 95815  
(916) 922-8041  
September 12, 2000

TUESDAY, SEPTEMBER 12, 2000 - 5:30 P.M.

**A. Introductions**

**B. Marine Reserves**

1. Request Council Include Enforcement Positions in Regional Committees

**C. Pacific Halibut**

1. Comments on Season Problems
2. Annual Regulations

**D. Groundfish**

1. Management Measures for 2001
2. Inseason Adjustments

**E. Salmon**

**F. Public Comment**

**G. Miscellaneous Items - Group Discussion**

ADJOURN

PFMC  
08/21/00

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

Pacific Fishery Management Council  
Red Lion Hotel Sacramento  
Sierra B Room  
1401 Arden Way  
Sacramento, CA 95815  
(916) 922-8041  
September 14, 2000

THURSDAY, SEPTEMBER 14, 2000 - 1 P.M.

**A. Call to Order**

John Royal, Chair

1. Roll Call, Chairman's Remarks, and Introductions
2. Approval of Agenda

**B. Review Council Actions from June Meeting**

Heather Munro

**C. Update on Capacity Study, Limited Entry, etc.**

Heather Munro

**D. Review Amendment 9**

Heather Munro

1. Bycatch Provisions
2. Optimum Yield and Maximum Sustainable Yield of Squid
3. Treaty Fishing Rights

**E. Draft Coastal Pelagic Species Advisory Subpanel Report to Council**

Heather Munro

**F. Other Business**

John Royal

1. Proposed Change in Terms for Council Advisory Body Members

**G. Schedule Next Meeting**

John Royal

ADJOURN

PFMC  
08/25/00