MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke
Executive Director

DATE: April 9, 1998

SUBJECT: Groundfish Amendments

ESTIMATED TIME
6 HOURS
for all D-1 items

ACTION REQUIRED

(a) Final review of Plan Amendments 48/48 to revise the annual specification process.

BACKGROUND

In December 1996, the Council approved development of a plan amendment proposed by NMFS. The objective of this amendment is to streamline the Council's current groundfish quota specification process. ABCs and TACs and PSC amounts would remain unchanged from year to year until revised in a final rule. The proposed change would eliminate several steps, thereby increasing overall efficiency and clarity, without sacrificing public access to information and the opportunity for public participation in the development of the specifications. First, publication of proposed and interim specifications in the *Federal Register* would be eliminated. Second, obsolete references to foreign and joint venture fishery management measures would be omitted from the FMPs. Neither foreign nor Joint Venture (JV) fishing vessels have operated in Alaska waters since 1991, and any discussion of foreign and JV allocations is unnecessary. As a result, the annual specification process would become more succinct and easier to understand. Third, NMFS would be given increased authority to adjust harvest levels on an inseason basis, based on scientific or socioeconomic concerns.

The analysis was made available to the public on March 16, 1998 and mailed to the Council on April 6, 1998. The management alternatives are:

Alternative 1. Status quo.

Alternative 2. Publication of proposed and interim specifications for BSAI and GOA groundfish fisheries would be eliminated. The previous year's specifications are effective until superseded. References to foreign and joint venture fisheries would be deleted from the FMP. Revise in-season closure authority.

Suggested format for the September SAFE report, pending approval of Amendments 48/48.

1. A revised SAFE report will not be required in September if:
   a) no new information is available for a stock or stock complex;
   b) catch biomass is the only new information available for the stock or stock complex.

2. A revised SAFE report will be required when:
   a) new parameters have been estimated for the assessment;
   b) new implementation software is used;
   c) the stock assessment model has been changed.

Under these circumstances, the assessment author must report all sections including the projections and harvest alternatives. An ABC recommendation will not be required. However, the author must supply enough information to allow the Plan Team and SSC a chance to anticipate the impact of this new information on yield projections.

Outline of SAFE Report Chapters [Revised by the Alaska Fisheries Science Center, April 1998]

This outline is intended to provide a consistent structure and logical flow for stock assessments conducted at the Alaska Fisheries Science Center for the groundfish fisheries of the eastern Bering Sea, Aleutian Islands region, and Gulf of Alaska. Some variation from this outline is permissible if warranted by limitations of data or other extenuating circumstance. However, it is particularly important that the items listed under "Projections and Harvest Alternatives" be included to the maximum extent possible, in that many of these are critical to the fishery management process.

Introduction

Scientific name
Description of general distribution
Description of management unit(s)
Evidence of stock structure, if any
Description of life history characteristics relevant to stock assessments (e.g., special features of reproductive biology)

Fishery

Description of the directed fishery
Information on bycatch and discards
Summary of historical catch distributions
List of management measures influencing the selectivity of commercial fishing gear or the distribution (by gear, area, or season) of the catch.

Data (Items in this section should be presented in tabular form.)

Data which should be presented as time series:
Total catch, partitioned by strata used in the assessment model, if any
Catch at age or catch at length, as appropriate
Survey biomass estimates
Survey numbers at age or numbers at length, as appropriate
Other time series data (e.g., predator abundance, fishing effort)
Sample sizes (e.g., numbers of age or length samples by year, gear, and area)

Data which may be aggregated over time:
- Length at age
- Weight at length or weight at age

Analytic Approach

Model Structure

- Description of overall modeling approach (e.g., age/size structured versus biomass dynamic, maximum likelihood versus Bayesian)
- Reference for software used (e.g., Synthesis, AD Model Builder)
- Description of, or reference for, population dynamic representations used in the model (e.g., Baranov catch equation, Brody length-at-age equation)
- Discussion of changes in any of the above since the previous assessment

Parameters Estimated Independently

- List of parameters that are estimated independently of others (e.g., the natural mortality rate, parameters governing the maturity schedule)
- Description of how these parameters are estimated (methods do not necessarily have to be statistical; e.g., M could be estimated by referencing a previously published value)

Parameters Estimated Conditionally

- List of parameters that are estimated conditionally on those described above (e.g., full-selection fishing mortality rates, parameters governing the selectivity schedule)
- Description of how these parameters are estimated (e.g., error structures assumed, list of likelihood components)

Model Evaluation

- Description of alternative models (e.g., alternative M values or likelihood weights)
- Description of criteria used to select final model
- Table of parameter estimates or other performance measures (e.g., likelihoods) resulting from alternative models
- Specification of final model
- List of final parameter estimates
- Schedules, if any, defined by final parameter estimates

Results

- Definition of biomass measures used (e.g., biomass at ages 3 and above)
- Definition of recruitment measures used (e.g., numbers at age 3)
- Definition of fishing mortality measures used (e.g., full-recruitment F multiplied by average selectivity for ages 3 and above)
- Table of estimated biomass time series, including spawning biomass as one measure. Include estimates from previous SAFE for retrospective comparisons.
- Table of estimated recruitment time series, including average. Include estimates from previous SAFE for retrospective comparisons.
- Table of estimated fishing mortality time series
- Graph of estimated biomass time series, with confidence bounds if possible

Projections and Harvest Alternatives

List of parameter and stock size estimates (or best available proxies thereof) required by limit and target control rules specified in the fishery management plan

Specification of F_{OFL}, OFL, the upper bound on F_{ABC}, and the minimum stock size threshold

List of alternative harvest strategies (e.g., a set of constant fishing mortality rates corresponding to different %SPR levels) consistent with the above and including both the limit and target control rules

List of alternative recruitment scenarios (e.g., constant recruitment equal to historic average, lognormal recruitment with parameters estimated from time series)

Table of 5-year projected catches corresponding to the alternative harvest strategies and alternative recruitment scenarios (mean values or other statistics may be shown in the case of stochastic recruitment scenarios)

Table of 5-year projected biomass, including spawning biomass, corresponding to the alternative harvest strategies and alternative recruitment scenarios (mean values or other statistics may be shown in the case of stochastic recruitment scenarios)

Discussion of information, if any, that might warrant setting ABC below the upper bound

Recommendation of F_{ABC} and ABC for coming year

Other Considerations

Discussion of any other pertinent information (e.g., ecosystem considerations, prohibited species concerns, bycatch issues, refuge areas, and gear considerations).

Summary

Table showing M, B_{MSY}, minimum stock size threshold, projected biomass for next year, F_{OFL}, F_{ABC}, OFL, and ABC.

Under Alternative 2, the Council at its December meeting would continue to annually recommend groundfish harvest specifications, PSC limits and apportionments thereof, and other management measures required to be annually specified by NMFS. Because the prior year's specifications would remain in effect until superseded by new specifications, NMFS needs enhanced authority to adjust fishery specifications after the December Council meeting and prior to the effective date of the new specifications (typically mid February - early March). This flexibility is necessary to respond to new information on status of stocks and the fisheries and to adjust TACs, PSC apportionments, or other specifications to addresses conservation, overfishing, bycatch, or socioeconomic concerns identified by the Council or NMFS. Adjustments could be downward or upward pending the information available. Any adjustment to existing specifications under the enhanced authority would be limited to the types of adjustments annually considered by the Council and implemented by NMFS under the annual specification process.

Examples of the types of inseason adjustments envisioned under Alternative 2 follow:

1. The current TAC for BS pollock is 1.1 million mt. New status of stocks information presented to the Council at its December meeting indicates that ABC for the upcoming year should be reduced to 900,000 mt. The Council adopts this level of harvest as TAC and adjusts the inshore, offshore, and CDQ quota amounts accordingly. The roe season TAC apportionment is unchanged from the current 45 percent of TAC.

Inseason adjustment: NMFS would implement a downward adjustment of pollock TAC by January 20 so that the roe season fisheries do not exceed the desired harvest limits prior the effective date of the final specifications.

2. The BSAI halibut PSC limit for trawl gear is apportioned seasonally among six BSAI trawl fishery categories. At its December meeting, the Council revised the seasonal bycatch allowances specified for a fishery so that "0" mt are apportioned for the first season starting Jan 20. The Council recommended that the remainder of the fishery's bycatch allowance becomes available July 1. This means the fishery would be prohibited until that date.

Inseason adjustment: NMFS would need to implement the revised seasonal apportionment by inseason adjustment to meet Council intent for optimizing bycatch relative to target groundfish harvest. Without the inseason adjustment, the fishery may be able to start on January 20, thus undermining Council intent to delay the fishery until July 1.

3. Based on new status of stock information presented to the Council and after consideration of marine mammal interactions, the Council recommended in December that the GOA pollock TAC in the Western and Central Regulatory Areas be increased for the upcoming year.

Inseason adjustment: In order to accommodate socioeconomic benefits from increased harvest opportunity and to remain consistent with regulatory limitations on the percentage of the annual TAC made available for harvest in each of three pollock seasons, NMFS could make this TAC increase effective by inseason adjustment prior to the start of the first GOA pollock season on January 20.

The existing inseason adjustment authority set forth in regulations at 50 CFR 679.22 is limited in nature and does not provide for the management flexibility necessary to accommodate short term changes in fishery specifications to accommodate conservation, overfishing, or socioeconomic concerns prior to the effective date of changes to those specifications. An enhanced inseason adjustment authority is an imperative component of the proposed TAC streamlining initiative and must be adopted as a component of that initiative to ensure that Council and NMFS management intent for the groundfish fisheries is not undermined.