





DATE: Comments must be received by [insert date 60 days after date of publication].

ADDRESSES: Send comments on these proposed guidelines to:  
Richard H. Schaefer, Office of Fisheries Conservation and  
Management, National Marine Fisheries Service, 1825 Connecticut  
Ave., N.W., Washington, D.C. 20235.

FOR FURTHER INFORMATION CONTACT: Richard H. Schaefer, telephone  
(202) 673-5263.

SUPPLEMENTARY INFORMATION: Revision of the national standard guidelines was precipitated, in part, by recommendations of the NOAA Fishery Management Study (the Study), commissioned by the Under Secretary for Oceans and Atmosphere and undertaken to assess and improve the Magnuson Act fishery management system. In June 1986, this Study recommended that NOAA assume responsibility for determining the acceptable biological catch (ABC) for each managed fishery. By ABC the Study meant the total allowable removals from the resource which would maintain a healthy and productive resource into the future. The Study's intent was that stocks be maintained at some level above that which protects the minimum spawning stock from recruitment overfishing. The Study sought a conservation standard such that stocks are not continually driven to, or maintained at, the threshold of overfishing.

In April 1987, NOAA distributed for Council/NMFS pre-publication review and comment a draft revision of 50 CFR 601, which sets forth the Secretary's uniform standards governing the Councils under the Act. This proposed revision included a section providing that a maximum fishing mortality (MFM) be established which would maintain the current spawning stock size with consideration of the variabilities in spawning stock estimates, and that ABC be specified so as not to exceed MFM. Council and NMFS comments concerning the MFM proposal made it clear that this proposal was not universally applicable for a variety of reasons.

Accordingly, in August 1987, NOAA convened a technical workshop of National Marine Fisheries Service (NMFS) fishery scientists and managers, and academic scientists recommended by the Councils, to address the Study's recommendations and the comments on the April draft. In October 1987, in order to allow time for a thorough examination of the issues raised by the workshop, the decision was made to separate the rest of the 601 proposal (which provides guidance to the Councils on organization and administrative questions) from the development of a conservation standard. In the Spring of 1988 a series of Council/NMFS regional workshops was held to discuss the acceptability and feasibility of the conservation standard concept, using as a basis for discussion the proposed revision of national standards 1 and 2 guidelines produced by the August 1987 technical workshop.

The proposed guideline revision that follows is responsive to the workshop series and sets forth a series of definitions and procedures, which together, are intended to provide the conservation standard.

Comments at the workshops centered primarily on the need for flexibility with regard to (a) the mandatory nature of any definition of overfishing, (b) the difficulty or impossibility of applying any rigid or universal definition to a large number of diverse species, (c) the fact that the ABC concept is not used by all Councils; (d) the bureaucratic chaos that might result from the proposed Secretarial exemption process; and (e) the burden imposed by the proposed Stock Assessment and Fishery Evaluation requirement.

Concern was also expressed that identification of thresholds might serve to establish targets for harvest rather than provide for conservation of the resources. Several Councils stated a need to (a) identify measurable "conditions of concern" for each stock, with monitoring and review procedures; (b) allow for conservative approaches when there is uncertainty because of lack of data; and (c) retain ability to take appropriate restrictive management actions at stock levels above the threshold.

Section 602.11 proposes an overall overfishing concept within which each Council must define a specific measurable

definition of overfishing for each stock or stock complex covered by an FMP. That concept is based on the premise that irreversible damage to a resource's ability to recover in an acceptable period of time is unacceptable, and to allow fishing on a stock at a level that severely compromises that stock's future productivity is counter to the goals of the Magnuson Act. The Councils are provided with the flexibility needed to develop a definition appropriate to the individual stock or species characteristics, and general criteria are set forth as a basis for Secretarial review. Provision is made for phasing-in implementation of the guidelines.

NOAA believes that, although it is difficult to define precisely the level at which overfishing jeopardizes recovery of a stock, there are indicators of existing or impending overfishing that should be heeded. These indicators may include evidence that: 1) recruitment is reduced when the stock size reaches historically low levels; 2) spawning stock is currently at a level below any previously recorded level; 3) spawning biomass is declining and recruitment information indicates that an historically low level of spawning biomass may result in the near future; and 4) the fishing mortality rate is such that spawning stock biomass will be reduced to an historically low level in the near future. If these conditions exist, the best scientific advice may conclude that immediate remedial action should be taken. Councils may, and are encouraged to, identify

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"conditions of concern" or establish an ABC level, but are not required to do so.

As management regimes become more comprehensive, the interrelationships of fishing pressures on target and non-target (both major and minor) species need to be addressed more directly. NOAA believes that in determining allowable fishing levels, Councils should consider all sources of mortality on a stock, including both targeted and non-targeted fishing mortality, and levels of compliance. Because all removals from the stock, whether landed or unlanded, will affect spawning stock biomass levels now or in the near future, the Councils should attempt to obtain estimates of all sources of mortality and consider the estimates in adjusting directed fishing levels. Total fishing mortality on a stock should be managed such that overfishing does not occur.

In selected situations, a Council may determine that overfishing of a minor component species of a multi-species fishery is warranted based on net benefits expected for the fishery as a whole. Although fishing any stock to the extent that it requires protection under the Endangered Species Act should never be allowed to occur, some very limited overfishing may be acceptable if it is identified, and sufficiently analyzed and justified. However, in all cases, alternatives should be considered that would prevent such overfishing.

Section 602.12(e) proposes that a periodic Stock Assessment and Fishery Evaluation (SAFE) document or set of documents be prepared or aggregated whereby Councils can obtain an objective periodic overview of the status of stocks and fisheries under management. Several Councils currently produce such fishery reviews annually within the FMP process, which generally provide the kinds of information called for in the SAFE report. The SAFE report would be expected to provide a summary of the best biological, social, and economic information available to a Council when needed (a) to determine annual harvest levels or OYS for species in each fishery management unit (FMU), and (b) to evaluate the effectiveness of its management in preventing overfishing as defined by the Council.

While the Secretary has responsibility for assuring that the SAFE report is produced, it is not intended to be exclusively authored by NOAA. The SAFE report may be produced by any combination of talent from Council, academic, government, or other sources. The SAFE reports are not required to be revised annually, except as there have been new developments or significant changes in a fishery. Although the contents of SAFE reports are not mandatory, certain basic descriptive data on the stocks and industry should be included.

The SAFE report is intended to provide a useful tracking tool for assessing the relative achievement of FMP objectives. It would establish a time-series data base indicating the



relative health of stocks and the industry dependent on them. Including social and economic information in the same document or set of documents with biological information does not diminish the integrity of either type of information. By providing the best scientific information available for each type of data required in the determination of Optimum Yield (OY), subject to Council and outside peer review, the SAFE report is designed to improve the ability of Councils to derive OY or any specified harvest level as the Act prescribes.

CLASSIFICATION:

The Under Secretary for Oceans and Atmosphere has determined...is issued in compliance with E.O. 12291.

Dated:

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For the reasons set out in the preamble, 50 CFR 602 is amended as set forth below:

Sec. 602.11 National Standard 1--Optimum Yield

(a) Standard 1. Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for United States fishing interests.

(b) General. The determination of OY is a decisional mechanism for resolving the Act's multiple purposes and policies, for implementing an FMP's objectives, and for balancing the various interests that comprise the national welfare. OY is based on MSY, or on MSY as it may be adjusted under paragraph (d)(3) of this section. The most important limitation on the specification of OY is that the choice of OY--and the conservation and management measures proposed to achieve it--must prevent overfishing.

(c) Overfishing. (1) Overfishing is a level or rate of fishing mortality that jeopardizes the long-term capacity of a stock or stock complex to produce maximum biological yield ~~or economic value~~ on a continuing basis. Each FMP must specify, to the maximum extent possible, an objective and measurable definition of overfishing for each stock or stock complex covered by that FMP, and provide an analysis of how the definition was determined and how it relates to reproductive potential.

(2) The definition of overfishing for a stock or stock complex may be developed or expressed in terms of a minimum level of spawning biomass ("threshold"); maximum level or rate of fishing mortality; or formula, model, or other measurable standard designed to ensure the maintenance of the stock's

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productive capacity. Overfishing must be defined in a way to enable the Council and the Secretary to monitor and evaluate the condition of the stock or stock complex relative to the definition.

(i) Councils should identify what actions <sup>or combination of actions</sup> will be taken if it is determined that a stock or stock complex is approaching an overfished condition.

(ii) If overfishing is defined in terms of a threshold biomass level, the Council must ensure that targeted fishing effort does not cause spawning biomass to fall or remain below that threshold.

(iii) If overfishing is defined in terms of a maximum fishing mortality rate, the Councils must ensure that targeted fishing effort on that stock does not cause the maximum rate to be exceeded.

(iv) If data indicate that an overfished condition exists, a program must be established for rebuilding the stock over a period of time specified by the Councils which is acceptable to the Secretary.

(3) Overfishing definitions must be based on the best scientific information available. Councils should build into the definition appropriate consideration of risk, taking into account uncertainties in estimating domestic harvest, stock conditions, or the effects of environmental factors (see 602.16). In cases where scientific data are severely limited, informed judgment must be used, and effort should be directed to identifying and

gathering the needed data (see 602.12--standard 2, and 605.14--data collection plans).

(4) Secretarial approval or disapproval will be based on consideration of whether the proposal--

(i) has sufficient scientific merit;

(ii) is likely to result in effective Council action to prevent the stock from closely approaching or reaching an overfished status;

(iii) provides a basis for objective measurement of the status of the stock against the definition; and

(iv) is operationally feasible.

(5) Changes in environment/habitat conditions can produce the appearance of overfishing. Significant adverse alterations in the environment increase the possibility that fishing effort will contribute to a stock collapse. Care should be taken to identify the cause of any downward trends in spawning stock sizes or average annual recruitment. Whether these trends ("conditions of concern") are caused by environmental changes or by fishing effort, the only direct control provided for by the Act is to reduce fishing mortality. Unless the Council asserts, as supported by appropriate evidence, that reduced fishing effort would not alleviate the problem, the FMP must include measures to reduce fishing mortality regardless of the cause of the low population level. <sup>man-made</sup> If environmental changes are ~~the~~ <sup>Contributing to</sup> primary cause ~~of~~ the downward trends, in addition to controlling effort Councils should recommend restoration of habitat and other ameliorative programs, to the extent possible.

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(6) An FMP must prevent overfishing, except in certain limited situations. For example, harvesting the major component of a mixed fishery at its optimum level may result in the overfishing of a minor (smaller or less valuable) stock component in the fishery management unit. A Council may decide to permit this type of overfishing if it is demonstrated by analysis (paragraph (f)(5) of this section) that it will result in net benefits to the fishery as a whole, and if the Council's action will not cause any stock component to require protection under the Endangered Species Act.

(7) Fishing can produce a variety of effects on local and areawide abundance, availability, size, and age composition of a stock. Some of these effects have been called "growth", "localized", or "pulse" overfishing; however, these effects are not necessarily "overfishing" under the standard 1 definition, which focuses on recruitment and long-term reproductive capacity. A Council may recommend conservation and management measures to prevent or permit these effects, depending on the objectives of a particular FMP, and the specific definition of overfishing established for the stock or stock complex under management. (See Appendix A to Subpart B of these guidelines, which offers cautionary, explanatory material.)

(8) Implementation of the guidelines under this section will be phased-in as follows:

(i) Any new FMP or amendment submitted six months or more after the effective date of these guidelines should include a

proposed definition of overfishing for the stock or stock complex managed under the affected FMP.

(ii) All FMPs must be amended to include an overfishing definition within eighteen months of the effective date of these guidelines.

(d) Maximum sustainable yield (MSY). (1) MSY is an estimate of the largest average annual catch or yield that can be taken over a significant period of time from each stock under prevailing ecological and environmental conditions.

(2) MSY may be presented as a range of values. One MSY may be specified for a related group of species in a mixed-species fishery. Since MSY is a long-term average, it need not be specified annually, but must be based on the best scientific information available.

(3) MSY may be only the starting point in providing a realistic biological description of allowable fishery removals. MSY may need to be adjusted because of environmental factors, stock peculiarities, or other biological variables, prior to the determination of OY. An example of such an adjustment is determination of ABC.

(e) Acceptable biological catch (ABC). (1) ABC is a preliminary description of the acceptable harvest (or range of harvests) for a given stock or stock complex. Its derivation focuses on the status and dynamics of the stock, environmental conditions, other ecological factors, and prevailing technological characteristics of the fishery.

(2) When ABC is used, its specification constitutes the first step in deriving OY from MSY. Unless the best scientific information available indicates otherwise (see Sec. 602.12), ABC should be no higher than the product of the stock's natural mortality rate and <sup>biomass of the</sup> ~~its~~ <sup>stock</sup> exploitable biomass. If a threshold has been specified for the stock, ABC must equal zero when the stock is at or below that threshold (see overfishing section above). ABC may be expressed in numeric and/or non-numeric terms.

(f) Optimum yield (OY). (1) Definition. The term "optimum" with respect to the yield from a fishery, means the amount of fish which will provide the greatest overall benefit to the Nation, with particular reference to food production and recreational opportunities; and which is prescribed as such on the basis of the maximum sustainable yield from each fishery, as modified by any relevant economic, social, or ecological factors (section 3(18)(b) of the Act).

(2) Values in determination. In determining the greatest benefit to the Nation, two values that should be weighed are food production and recreational opportunities (section 3(18)(a) of the Act). They should receive serious attention as measures of benefit when considering the economic, ecological, or social factors used in modifying MSY to obtain OY.

(i) "Food production" encompasses the goals of providing seafood to consumers at reasonable prices, maintaining an economically viable fishery, and utilizing the capacity of U.S. fishery resources to meet nutritional needs.

(ii) "Recreational opportunities" includes recognition of the importance of the quality of the recreational fishing experience, and of the contribution of recreational fishing to the national, regional, and local economies and food supplies.

(3) Factors relevant to OY. The Act's definition of OY identifies three categories of factors to be used in modifying MSY to arrive at OY: economic, social, and ecological (section 3(18)(b)). Examples are given below. Not every factor will be relevant in every fishery; for instance, there may be no Indian treaty rights. For some fisheries, insufficient information may be available with respect to some factors to provide a basis for corresponding modifications to MSY.

(i) Economic factors. Examples are promotion of domestic fishing, development of unutilized or underutilized fisheries, satisfaction of consumer and recreational needs, and encouragement of domestic and export markets for U.S. harvested fish. Some other factors that may be considered are <sup>and recre opportunities</sup> the value of industrial fisheries, the level of capitalization, operating costs of vessels, alternate employment opportunities, and economies of coastal areas.

(ii) Social factors. Examples are enjoyment gained from recreational fishing, avoidance of gear conflicts and resulting disputes, preservation of a way of life for fishermen and their families, and dependence of local communities on a fishery. Among other factors that may be considered are the cultural place of subsistence fishing, obligations under Indian treaties, and world-wide nutritional needs.



(iii) Ecological factors. Examples are the vulnerability of incidental or unregulated species in a mixed-species fishery, predator-prey or competitive interactions, and dependence of marine mammals and birds or endangered species on a stock of fish. Equally important are environmental conditions that stress marine organisms, such as natural and man-made changes in wetlands or nursery grounds, and effects of pollutants on habitat and stocks.

(4) Specification. (i) The "amount of fish" that constitutes the OY need not be expressed in terms of numbers or weight of fish. The economic, social, or ecological modifications to MSY may be expressed by describing fish having common characteristics, the harvest of which provides the greatest overall benefit to the Nation. For instance, OY may be expressed as a formula that converts periodic stock assessments into quotas or guideline harvest levels for recreational, commercial, and other fishing. OY may be defined in terms of an annual harvest of fish or shellfish having a minimum weight, length, or other measurement. OY may also be expressed as an amount of fish taken only in certain areas, or in certain seasons, or with particular gear, or by a specified amount of fishing effort. In the case of a mixed-species fishery, the incidental-species OY may be a function of the directed catch, or absorbed into an OY for related species.

(ii) If a numerical OY is chosen, a range or average may be specified.

(iii) In a fishery where there is a significant discard component, the OY may either include or exclude discards, consistent with the other yield determinations.

(iv) The OY specification can be converted into an annual numerical estimate to establish <sup>any</sup> the TALFF and to analyze impacts of the management regime. There should be a mechanism in a multiyear plan for periodic reassessment of the OY specification, so that it is responsive to changing circumstances in the fishery. (See section 602.12(e)).

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(v) The determination of OY requires a specification of MSY. However, where sufficient scientific data as to the biological characteristics of the stock do not exist, or the period of exploitation or investigation has not been long enough for adequate understanding of stock dynamics, or where frequent large-scale fluctuations in stock size make this concept of limited value, the OY should be based not on a fabricated MSY but on the best scientific information available.

(5) Analysis. An FMP must contain an analysis of how its OY specification was determined (section 303(a)(3) of the Act). It should relate the explanation of overfishing in paragraph (c) of this section to conditions in the particular fishery, and explain how its choice of OY and conservation and management measures will prevent overfishing in that fishery. If overfishing is permitted under paragraph (c)(6) of this section, the analysis must contain a justification in terms of overall benefits and an assessment of the risk of the species <sup>on a stock component</sup> reaching a "threatened" or "endangered" status. A Council must identify those economic,

social, and ecological factors relevant to management of a particular fishery, then evaluate them to arrive at the modification (if any) of MSY. The choice of a particular OY must be carefully defined and documented to show that the OY selected will produce the greatest benefit to the Nation.

(g) OY as a target. (1) The specification of OY in an FMP is not automatically a quota or ceiling, although quotas may be derived from the OY where appropriate. OY is a target or goal; an FMP must contain conservation and management measures, and provisions for information collection, that are designed to achieve OY. These measures should allow for practical and effective implementation and enforcement of the management regime, so that the harvest is allowed to reach but not to exceed OY by a substantial amount. The Secretary has the obligation to implement and enforce the FMP so that OY is achieved. If management measures prove unenforceable--or too restrictive or not rigorous enough to realize OY--they should be modified; an alternative is to reexamine the adequacy of the OY specification.

(2) Exceeding OY does not necessarily constitute overfishing, although they might coincide. Even if no overfishing resulted, continual harvest at a level above a fixed-value OY would violate national standard 1 because OY was exceeded (not achieved) on a continuing basis.

(h) OY and foreign fishing. Section 201(d) of the Act provides that fishing by foreign nations is limited to that portion of the OY that will not be harvested by vessels of the United States.

(1) DAH. Councils must consider the capacity of, and the extent to which, U.S. vessels will harvest the OY on an annual basis. Estimating the amount that U.S. fishing vessels will actually harvest is required to determine the surplus.

(2) Reserves. Part of the OY may be held as a reserve to allow for uncertainties in estimates of stock size and of DAH, *or to solve operational problems \** If an OY reserve is established, an adequate mechanism should be included in the FMP to permit timely release of the reserve to *Domestic or foreign fishermen if necessary.* *any* *OK* so that full utilization of OY may be achieved. *Reservations* [An FMP may also provide for a direct transfer of a portion of DAH to TALFF.] *Delete*

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(3) DAP. (i) Each FMP must identify the capacity of U.S. processors. It must also identify the amount of domestic annual processed fish (DAP), which is the sum of two estimates:

(A) The amount of U.S. harvest that domestic processors will process. This estimate may be based on historical performance and on surveys of the expressed intention of manufacturers to process, supported by evidence of contracts, plant expansion, or other relevant information; and

(B) The amount of fish that will be harvested but not processed (e.g., marketed as fresh whole fish, used for private consumption, or used for bait).

(ii) When DAH exceeds DAP, the surplus is available for JVP. JVP is a part of DAH.

*\* incl National for Daphne*



Sec. 602.12 National Standard 2--Scientific Information

(a) Standard 2. Conservation and management measures shall be based upon the best scientific information available.

[602.12 remains unchanged except for the addition of paragraph (e) as follows:]

(e) Stock Assessment and Fishery Evaluation (SAFE) Report.

(1) The SAFE report is a document or set of documents that provides Councils with a summary of the most recent biological condition of species in the fishery management unit (FMU), and the social and economic condition of the recreational and <sup>commercial</sup> fishing industries and the fish processing industries. It summarizes, on a periodic basis, the best available scientific information concerning the past, present, and possible future condition of the stocks and fisheries being managed under Federal regulation.

(i) The Secretary has the responsibility to assure that a SAFE report or similar document is prepared, reviewed annually, and changed as necessary for each FMP. The Secretary or Council may call on any combination of talent from Council, State, university, or other sources (but at a minimum must include Council and NMFS representatives) to acquire and analyze data and produce the SAFE report.

(ii) The SAFE report provides information for determining annual harvest levels from each stock, documenting significant trends or changes in the resource and fishery over time, and

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assessing the relative success of existing State and Federal fishery management programs. In addition, the SAFE report may be used to update or expand previous environmental and regulatory impact documents, and ecosystem and habitat descriptions.

(iii) Each SAFE report must be scientifically based, and cite data sources and interpretations.

(2) Each SAFE report should contain information on which to base harvest specifications. Examples are:

(i) Estimates of biomass or spawning biomass for each stock in the FMU;

(ii) Estimates of the annual surplus production (ASP) and MSY for each stock in the FMU;

(iii) Description of the estimated biomass, ASP, and MSY in previous years relative to those estimates for the current or next year;

(iv) Description of the model or assumptions on which these estimates are based and a discussion of the reliability of each estimate;

(v) If a stock is below the level which will produce MSY, estimated time necessary to allow the stock to rebuild to MSY, threshold or other specified level under various harvest levels and prevailing environmental conditions; and

(vii) Significant changes (if any) in the habitat or ecosystem since it was last described in the FMP, an amendment to the FMP, or previous SAFE report.

(3) Each SAFE report should contain information on which to assess the condition of the recreational and commercial fishing industries and fish processing industries. Examples are:

(i) Estimate of the amount of fish harvested from each stock in the FMU, by gear type and area, in the most recent three years and in the year immediately prior to implementation of the FMP governing fisheries for (or in) the FMU. If applicable, the amount of fish harvested in the same time period by wholly domestic, joint venture and foreign fisheries;

(ii) The approximate exvessel value of the harvested fish described in paragraph (e)(3)(i) of this section;

(iii) Amounts and estimated value of each type of processed products derived from the harvested fish described in paragraph (e)(3)(i) of this section;

(iv) Estimates of the numbers of commercial vessels, by gear type and in terms of individual vessels, involved in each fishery for (or in) the FMU;

(v) Estimates of the number of commercial fishermen employed in each fishery for (or in) the FMU:

(vi) The numbers of processing plants, floating and shore based, individual and by product type, involved in processing the harvested fish described in (e)(4)(i) of this section;

(vii) Estimates of the amount of fish harvested by recreational fishermen from the FMU;

(viii) Estimates of the numbers of recreational fishermen who harvested fish from the FMU;

(ix) Estimates of the number of charter vessels and party boats involved in the recreational fishery; and

(x) The estimated value of the recreational fishery for (or in) the FMU.

(4) Each SAFE report may contain additional economic, social, and ecological information pertinent to the success of management or the achievement of objectives of each FMP.

Examples are:

(i) Enforcement actions taken and penalties assessed and collected over the most recent three years under an implemented FMP;

(ii) Significant changes (if any) in State regulations pertinent to the FMU and their known or anticipated effects on stocks in the FMU;

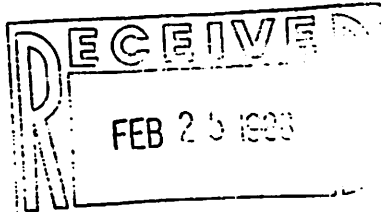
(iii) Significant changes (if any) in related fisheries which may affect the fishing effort for (or in) the FMU; and

(iv) Potential conservation and management problems, their possible causes and solutions.

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Drafters/Reviewers: White, Brown, Thompson, Fougner, Ginter, Meehan, Darcy, Cooney, Fraily, Terbush, Schaefer





UNIVERSITY OF WASHINGTON  
SEATTLE, WASHINGTON 98195

February 19, 1988

*College of Ocean and Fishery Sciences*  
*Office of the Dean, HN-15*

Mr. Richard Schaefer  
National Marine Fishery Service  
1825 Connecticut Avenue NW  
Washington, D.C. 20235

Dear Dick:

This letter is in response to your request, at the meeting in Seattle on February 4, to provide you in writing our Committees views on the 603 guidelines. We propose the following definitions:

Acceptable Biological Catch (ABC)

Acceptable Biological Catch (ABC) is an acceptable level of harvest which recognizes the status and dynamics of the stock, environmental conditions and ecological factors. It is developed and justified on the basis of relevant biological environmental and ecological information. Lacking justification of a methodology to derive ABC, it should be no higher than the natural mortality rate multiplied by an estimate of the exploitable biomass. ABC must equal zero when the stock is at or below its "threshold". If it is used, ABC is the first step in deriving optimum yield (OY) from maximum sustained yield (MSY). It may be expressed in numeric or non-numeric terms.

Optimum Yield (OY)

The term "optimum" with respect to the yield from a fishery, is the amount of fish which will provide the greatest overall benefit to the nation, with particular reference to food production and recreational opportunities; and which is prescribed as such on the basis of the maximum sustainable yield from each fishery, as modified by any relevant economic social, or ecological factor. In the determination of OY, a council should consider safety factors and the uncertainty of assessments.

Threshold

Threshold is the population level below which there is concern over the ability to rebuild the stock over an acceptable period of time. A threshold level will be developed based on relevant scientific information. Lacking justification of a methodology to calculate threshold, it shall be not less than 25 percent of the biomass expected in the long term absence of a fishery.

Page 2  
Mr. Richard Schaefer

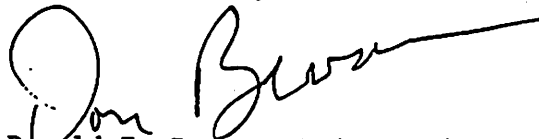
Overfishing

Overfishing is the application of exploitation rates that drive the stock below its threshold. Exceeding biological acceptable catch need not result in overfishing, unless that excess is carried out over sufficient time at high enough exploitation rates to reduce the population below the threshold.

In addition to the definitions, the record of your meeting makes very clear our views on a number of matters such as the replacement of the secretarial exemption procedure with the normal process for plan adoption, amendment, or rule making. If you decide to continue with the exemption process, we suggest that it be turned around, so that the secretary intervenes rather than require the Council to request an exception.

It is our understanding that after your regional meetings you will revise the 603 guidelines and they will be returned to the Councils prior to their publication in the federal register. If we can be of any further assistance, please call upon us.

Sincerely yours,



Donald E. Bevan, Chairman  
Scientific and Statistical Committee  
Pacific Fishery Management Council

and



Richard Marasco, Chairman  
Scientific and Statistitcal Committee  
North Pacific Fishery Committee Council

DB:pf  
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cc: Jim Branson ✓  
Larry Six



## SUMMARY OF MEETING

Joint Meeting of Scientific and Statistical Committee's (SSC)  
Pacific Fishery Management Council (PFMC)  
North Pacific Fishery Management Council (NPFMC)  
Western Pacific Fishery Management Council (WPFMC)  
Seattle Airport Hilton, Seattle, Washington  
February 4, 1988

The meeting of the Pacific, North Pacific, and Western Pacific SSC's was called to order by Dr. Donald Bevan at 1:48 p.m. on February 4, 1988. See Appendix A for a copy of the agenda.

### Attendees

Dr. Donald Bevan, PFMC SSC  
Dr. William Clark, PFMC SSC  
Mr. Svein Fougner, National Marine Fisheries Service, Southwest Region  
Mr. Jay Ginter, National Marine Fisheries Service, Alaska Region  
Mr. Nicholas Iadanza, National Marine Fisheries Service, Portland, OR  
Dr. Richard Marasco, NPFMC SSC  
Dr. Craig MacDonald, WPFMC SSC  
Dr. Marc Miller, PFMC SSC  
Dr. Sam Pooley, WPFMC SSC  
Mr. William Robinson, National Marine Fisheries Service, Northwest Region  
Dr. Grant Thompson, National Marine Fisheries Service, Northwest and Alaska Fisheries Center  
Ms. Daphne White, National Marine Fisheries Service, Washington, DC

### Others

Mr. Jim Branson, NPFMC Staff  
Mr. Gerald Fisher, PFMC Staff  
Dr. Clarence Pautzke, NPFMC Staff  
Mr. William Royce, NMFS Retired  
Ms. Kitty Simonds, WPFMC Staff  
Mr. Lawrence Six, PFMC Staff

An attendance roster is included in Appendix B.

### Purpose of Meeting

The purpose of this meeting was to reach a consensus, in concept, on the 603 guideline definitions, the 603 process of implementation, and the 601-602 regulation's impact on the SSC process. Subsequent to this meeting, this group will meet with representatives of National Marine Fisheries Service (NMFS) to discuss the results of this meeting. Three regional meetings are planned in order to secure input from all councils. The results of all three meetings will be incorporated into a final draft which will be circulated to all councils for comments.

## 603 Guideline Definitions

### Acceptable Biological Catch (ABC)

Dr. Bevan stated Pacific Council SSC recommended that reference to safety factors, risk assessment, and technological and temporal fishing patterns be deleted from the definition of ABC, since these factors pertain to optimum yield (OY) not ABC. The purpose of ABC is to separate biology from socio-economic and legal factors. A copy of the Pacific Council SSC statement is included in Appendix C.

Dr. Richard Marasco reported the North Pacific SSC concurred with the Pacific Council comments on ABC and supported the modifications suggested. A copy of NPFMC's statement is included in Appendix D.

Mr. Sam Pooley explained the Western Pacific Council SSC did not consider the concept of ABC because it is not used in their management. They believe the guidelines currently in use are adequate. Further, he suggested that if these guidelines are adopted, the language should read that ABC "may be used" instead of "should be used."

Mr. Craig McDonald expressed concern over whether constant harvest would preclude pulse fishing. He explained that pulse fishing is being considered in the precious coral fishery. Dr. Bevan felt that this was not a concern because the definition also includes a statement "unless other biological information justifies a different method of derivation."

Mr. Lawrence Six pointed out that not all fisheries are managed by an ABC, for instance the salmon fishery. He suggested that the guidelines reflect this. Dr. Bevan agreed with Mr. Six and stated that not only the definitions are important but also the process in which they are used is important.

Dr. Grant Thompson expressed his view that ABC should be replaced with a term that represents the scientists' recommended catch. This catch recommendation should be based on the best scientific information available regardless of whether that information is biological, economic, mathematical, or other. Further, this catch recommendation should always be presented with explicit statements of the objectives and assumptions used in its calculation. A detailed description of Dr. Thompson's views is included in Appendix E.

Mr. Pooley agreed with Dr. Thompson's conclusions and urged that the scientists be allowed to make recommendations taking into account the best scientific information available.

Dr. Bevan supported the two step process--the first step being establishing an ABC and then determining OY. Determining OY is a management decision.

The group agreed on the North Pacific Council's fallback definition of calculating ABC; i.e., ABC should be no higher than the natural mortality rate multiplied by the exploitable biomass.

Ms. Daphne White noted that the initial Council guidelines were interim and comments were accepted for improvement for approximately a year. It may be possible to handle these guidelines in that manner also.

Dr. Marc Miller stated that if you do not have a threshold, a species may be put on the endangered species list. Once a species is on the endangered species list it is very difficult to remove them from the list.

A copy of the Pacific and North Pacific Council recommendation for specific language of the definitions is included in Appendix B.

#### Acceptable Biological Catch (ABC)

Dr. Bevan reviewed the Pacific and North Pacific council's suggestions for changes in the ABC definition. He noted there are other methodologies of setting ABCs than the constant exploitation rate as suggested in the proposed definition. Both council's concurred with the concept that ABC is zero when a fishery is at or below its threshold. ABC should be no higher than the natural mortality rate multiplied by the exploitable biomass. Further, the reference to safety factors and risk assessment should be removed from the ABC definition, since this pertains to optimum yield (OY).

Mr. Six asked if it was the intent of the guidelines to require that ABC be used by all councils for all fisheries. ABCs are not used for all fisheries, for instance the salmon fishery. Mr. Schaefer answered that originally it was intended for all fisheries, but NMFS has reconsidered since that time. Mr. Six suggested that the guidelines make it clear that ABC is one method of departing from MSY to arrive at OY.

Dr. Sam Pooley stated that the Western Pacific Council does not use ABCs at all and therefore they are not used in calculating OY. The guidelines should be viewed as enabling rather than mandating.

#### Optimum Yield

The Pacific and North Pacific Council's suggested adding a reference to safety factors and risk assessments to the OY definition as derived from ABC.

#### Overfishing

Both the Pacific and North Pacific Councils agreed to the definition of overfishing but suggested the Secretarial exception process be changed to the power to intercede and overturn a decision when he disagrees with a determination.

#### Confidentiality of Statistics

Dr. Bevan iterated the Pacific Council SSC's view that the SSC should have access to confidential statistics.

#### Stock Assessment and Fishery Evaluation (SAFE) Document

The Pacific Council SSC suggested the 602 regulations relating to the SAFE document include what is intended to be in the document, who prepares it, and that it must be prepared. Further, the "musts" be replaced with "shoulds."

Adjournment

The meeting was adjourned at 4:15 p.m.

SUMMARY OF MEETING  
Conservation Standards Workshop  
Seattle Airport Hilton, Seattle, Washington  
February 5, 1988

The meeting of the Pacific, North Pacific, and Western Pacific SSC and National Marine Fisheries Service (NMFS) representatives was called to order by Mr. Richard Schaefer at 8:40 a.m. on February 5, 1988.

Attendees

Dr. Donald Bevan, Pacific Fishery Management Council (PFMC), Scientific and Statistical Committee  
Dr. Brad Brown, NMFS, Southeast Fisheries Center  
Dr. William Clark, PFMC SSC  
Ms. Eileen Cooney, National Oceanic and Atmospheric Administration, General Counsel  
Mr. Svein Fougner, NMFS, Southwest Region  
Mr. Jay Ginter, NMFS, Alaska Region  
Dr. Richard Marasco, North Pacific Fishery Management Council (NPFMC), SSC  
Dr. Craig MacDonald, Western Pacific Fishery Management Council (WPFMC), SSC  
Dr. Marc Miller, PFMC SSC  
Dr. Sam Pooley, WPFMC SSC  
Mr. William Robinson, NMFS, Northwest Region  
Mr. Richard Schaefer, NMFS, Washington, DC  
Dr. Grant Thompson, NMFS, Northwest and Alaska Fisheries Center  
Ms. Daphne White, NMFS, Washington, DC

Others

Mr. Jim Branson, NPFMC Staff  
Mr. Gerald Fisher, PFMC Staff  
Dr. Clarence Pautzke, NPFMC Staff  
Mr. William Royce, NMFS Retired  
Ms. Kitty Simonds, WPFMC Staff  
Mr. John Sproul, WPFMC Staff  
Mr. Lawrence Six, PFMC Staff

An attendance roster is included in Appendix A.

Purpose of Meeting

On the previous day, SSC representatives from each of the three council met to form a consensus on the 603 guideline definitions, the 603 process of implementation, and the 601-602 regulation's impact on the SSC process. The purpose of this meeting was to relate the results of the joint SSC meeting and to discuss conservation standards with NMFS representatives.

Mr. Schaefer summarized the events to date and the reasons for developing the conservation standards including rationale for the definitions of threshold, overfishing, maximum sustainable yield (MSY), etc.



## Conservation Standards

Dr. Bevan summarized the February 4, 1988 joint SSC meeting. He stated the Western Pacific Council recommended continuing on a status quo basis. Although the Pacific and North Pacific councils accepted and supported in general the concept of a conservation standard, a number of suggestions were made for changes in the definitions and the process.

Dr. Sam Pooley stated the Western Pacific Council appreciates the importance of a conservation standard, but indicated it is not appropriate in their management area. He expressed particular concern over the definition of threshold. The Western Pacific Council manages for MSY and views threshold as providing for overfishing.

The Pacific and North Pacific Council suggested the Secretarial exception process be required only if the Secretary disagrees with a council decision. It would be similar to the process now being followed.

Mr. Jim Branson expressed concern that the Secretarial exception process is redundant in that data used to make Council decisions have already gone through multiagency review by plan management and development teams and SSCs which include experts in fishery management. Dr. Brad Brown pointed out that this is not necessarily the case on the east coast.

### Threshold

Dr. Bevan noted the threshold definition indicates there must be proof the stock is jeopardized and not able to return to an MSY level. This presents the disadvantage of waiting too long before making a determination that the stock is stressed. Determining MSY biomasses is not only difficult but also subject to a great deal of variability. Dr. Bevan suggested the threshold be based on 25 percent of the expected biomass in the fishery without fishing. Further, the Secretarial exception should be eliminated from the definition.

Dr. Richard Marasco explained the difference between virgin biomass and the 25 percent of the expected biomass in the fishery without fishing as noted by Dr. Bevan above. The number was not changed, only the method used to arrive at the number.

The WPFMC SSC believes a conservation ethic is important, but a nationally-mandated threshold is not considered useful. They view the threshold as poorly developed scientifically and practically difficult to measure and implement. Collaborative discussions on the scientific basis of management, both within the Council family and between councils, are important.

Mr. Lawrence Six suggested another draft of the conservations standards reflecting the results of the three workshops should be sent to each council for comment. Mr. Schaefer suggested a letter from each of the council's iterating their views on the conservation standards.

Mr. Six expressed concern over publishing final guidelines on such new concepts when each time we meet we are continually revising the definitions. He suggested putting these guidelines into practice in various regions on a trial basis first.

### Optimum Yield

The Pacific Council SSC agreed with the proposed definition of OY with the addition of a sentence that specifies safety factors and the uncertainty of assessments should be considered.

The Western Pacific Council SSC did not address this definition.

There was some discussion on whether safety factors included vessel safety or only biological safety.

### Threshold

The Pacific and North Pacific Council SSC's both supported the use of thresholds as a mechanism for expressing a strong conservation ethic and a useful way of defining overfishing.

Further, the Pacific Council SSC suggested the council, team, and SSC should make determinations based on the best information available. The Secretary of Commerce would have the power to intercede (on an exception basis) and overturn a decision when he disagrees with a determination.

The Western Pacific Council SSC was opposed to a threshold concept being mandated. Fisheries are now being managed by maximum sustainable yield (MSY). To create another term which allows the resource to be fished below the MSY level would allow fishermen to push for more fishing effort.

### Overfishing

The North Pacific Council SSC modified the definition for overfishing slightly but agreed it is important to define overfishing and to the concept expressed in the draft.

### Secretarial Exception

Following a lengthy discussion on secretarial exceptions, the group agreed to add to §603.11(j)(1)(iii) "If a Council requests a Secretarial exception to **fish or harvest at or below a stock's threshold** under paragraphs (e) and (i), its analysis in support of its request must-- . . ." (Additions denoted with boldface type.)

### 603 Process of Implementation and 601-602 Regulations Impact on SSC Process

Dr. Bevan suggested the 602 regulations relating to the Stock Assessment and Fishery Evaluation (SAFE) document be stated in generalities; i.e. what it is intended to be, who prepares it, and that it must be prepared. Further, the "musts" be replaced with "shoulds."

### Confidentiality of Statistics

The Pacific Council SSC felt it would be useful for SSC members to have access to confidential statistics.

Ms. Eileen Cooney agreed with Dr. Bevan that "must" in a guideline is almost as strong as "must" in a regulation. Guidelines are binding unless a variance is well justified.

Dr. Pooley concurred with Dr. Bevan's statement.

#### Summary

The chairmen of the respective SSCs were asked to summarize their comments in writing and forward them to Mr. Schaefer. The comments will be reviewed and a redraft of the conservation standards will be produced and sent to all the councils.

#### Adjournment

The meeting was adjourned at 11:26 a.m.

PFMC  
04/12/88

Honolulu Laboratory  
National Marine Fisheries Service  
2570 Dole Street  
Honolulu, HI 96822  
(808) 943-1221

March 23, 1988

Mr. Lawrence D. Six  
Executive Director  
Pacific Fishery Management Council  
Metro Center, Suite 420  
2000 S.W. First Avenue  
Portland, Oregon 97201

Dear Larry:

I've scribbled a few minor edits on the draft minutes you prepared on the Seattle Conservation Standards Workshop. I have no quarrel with your summary.

My only substantive comment is a request to point out in the text, probably under the Threshold heading, that the Western Pacific Council's SSC position includes the point:

"The Western Pacific SSC believes a conservation ethic is important but a nationally-mandated threshold is not considered useful. We view the threshold as poorly developed scientifically and practically difficult to measure and implement. Collaborative discussions on the scientific basis of management, both within the Council family and between Councils are important."

I think both these points are important to make because they speak to our opposition to the thresholds while at the same time accepting the spirit of the North Pacific and Pacific Council approaches to this issue. (I'm not sure that we (the SSC) accept the earlier "spirit" of the NMFS HQ approach to the issue.)

As I returned to Hawaii I wondered whether in fact we could avoid the overfishing problems which seem to face other councils. The lack of a national commitment to managing fisheries, in the context of a laissez faire orientation to government regulation in general, makes many conciliatory approaches to local fisheries management difficult to achieve. Ironically, in the bottom fishery which is apparently on the verge of biological overfishing (growth not recruitment), and certainly overfished economically, it is Washington

(specifically OMB), which has posed the problems in avoiding overfishing. The quota orientation toward fisheries management which was first appropriated by biologists and now appropriated by economists is so simple in concept and so impossible in reality that I continue to be amazed at its perseverance. These of course are subsidiary comments to the workshop itself.

Anyway, thank you for hosting the meeting and I hope we have a chance to collaborate in the future.

Best regards.

Sincerely,



Sam Pooley  
Fishery Management  
Research Program

Enclosure

cc: G.W. Boehlert, HL  
K. Simonds, Council



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Northwest and Alaska Fisheries Center  
Resource Ecology and Fisheries  
Management Division  
7600 Sand Point Way Northeast  
BIN C15700, Building 4  
Seattle, Washington 98115-0070

July 27, 1988

Mr. James O. Campbell  
Chairman  
North Pacific Fishery Management Council  
605 West 4th Avenue  
P.O. Box 103136  
Anchorage, Alaska 99510

Dear Jim,

At their June meetings, the North Pacific and Pacific Fishery Management Council's SSC's reviewed the 6/6/88 Draft 602 Guidelines for Fishery Management Plans. Both SSC's are of the opinion that it represents a significant improvement over earlier versions. Changes made in the guidelines have yielded a document that is acceptable.

Enclosed is a copy of comments prepared by the Pacific Fishery Management Council's SSC. These comments are endorsed by the North Pacific Fishery Management Council's SSC.

Sincerely,

Richard Marasco  
Chairman, SSC  
NPFMC

Sincerely,

Donald Bevan  
Chairman, SSC  
PFMC

cc: C. Pautzke

Enclosure



SCIENTIFIC AND STATISTICAL COMMITTEE (SSC) COMMENTS ON  
CONSERVATION STANDARDS

The SSC reviewed the proposed rule for 602 conservation standards attached to Mr. James Brennan's letter of June 9, 1988. The SSC finds the document to be a reasonable set of guidelines that allows the Council the flexibility needed to specify overfishing and prepare SAFE reports. The SSC noted three wording changes. These are:

1. delete "or economic value" on page 9, line 4, under (c).
2. replace "its exploitable biomass" with "biomass of the exploitable stock" on page 14, line 5.
3. for reserves described on page 19, reserves may also be needed when joint venture processing occurs and domestic annual processing (DAP) is not well-known. Reserves may also be useful when DAP is allocated among competing domestic fishing groups. This concept of reserves is too narrow.

The SSC notes that the list of four indicators of overfishing given on page 5 does not necessarily imply overfishing. Historical low level of spawning biomass could actually be relatively high for a fishery that started with a high virgin biomass. The SSC recommends these comments be passed on to the National Marine Fisheries Service at the upcoming Council Chairman's meeting in Homer, Alaska.

PFMC  
07/12/88