federal register

Monday
July 24, 1989

Part II

Department of Commerce

National Oceanic and Atmospheric Administration

50 CFR Part 602

Guidelines for Fishery Management Plans; Final Rule

7-24-89
Vol. 54 No. 140
Pages 30711-30880

federal register

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration
50 CFR Part 602
[Docket No. 81011-9132]

Guidelines for Fishery Management Plans

Editorial Note: This reprint incorporates corrections published in the **Federal Register** of Monday, July 31, 1989.

AGENCY: National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Final rule.

SUMMARY: NOAA issues this rule to revise the advisory guidelines for two of the seven national standards for fishery conservation and management set forth in section 301(a) of the Magnuson Fishery Conservation and Management Act (the Act). Section 301(a) requires that all fishery management plans (FMPs) and implementing regulations be consistent with the standards. Section 301(b) of the Act requires the Secretary of Commerce (Secretary) to issue advisory guidelines, based on the standards, to assist in the development and review of FMPs, their amendments, and implementing regulations. The guidelines are intended to improve the quality of FMPs by providing comprehensive guidance for Regional Fishery Management Councils (Councils) to use in developing FMPs and amendments, and to produce a more uniform understanding of the Secretary's basis for FMP review and implementation. The original guidelines were issued in February 1983.

This rule revises the guidelines for national standards 1 and 2 only. Standard 1, as set forth in the Act, requires conservation and management measures to prevent "overfishing" while achieving "optimum yield" (OY) on a continuing basis. Standard 2 requires conservation and management measures to be based on the best scientific information available.

The Act does not define overfishing, nor do most FMPs. Further, the biological data necessary to determine overfishing has sometimes been unavailable. As a result, Councils have often made decisions based primarily on short-term economic and political considerations, with lesser emphasis placed on the long-term viability of the fishery resource or the fishing industry. In order to assure that the Councils give appropriate decisional weight to long-term viability, the revised guidelines stipulate that: (1) Each existing and future FMP specify, to the maximum extent possible, an objective and measurable definition of overfishing for each managed stock or stock complex, with an analysis of how the definition was determined and how it relates to biological potential; and (2) the Secretary is responsible for assuring that a Stock Assessment and Fishery Evaluation (SAFE) report is prepared and updated as necessary, for each fishery. The SAFE report summarizes the best available biological, economic, social, and ecological information concerning the past, present, and potential condition of the stock(s) and fishery being managed.

The short-term effect of the revised guidelines will be that more restrictive regulation will be necessary in those fisheries where stocks are approaching or have reached an overfished condition as defined in the FMP. The intended long-term effect is to assure that the reproductive capacity of any managed stock is not jeopardized, that depleted stocks are rebuilt, and that economically viable future harvests on a continuing basis are possible.

To provide the proper context and as a convenience to the reader, this final rule republishes the guidelines for the seven national standards in their entirety, along with an updated Appendix containing explanatory material.

EFFECTIVE DATE: August 23, 1989.

FOR FURTHER INFORMATION CONTACT: Richard H. Schaefer, telephone: 301-427-2334.

SUPPLEMENTARY INFORMATION:

Background

Revision of the guidelines for national standards 1 and 2 was precipitated, in part, by recommendations of the NOAA Fishery Management Study (the Study), commissioned by the Under Secretary of Commerce for Oceans and Atmosphere and undertaken to assess and improve the Magnuson Act fishery management system. In June 1986, the Study recommended that NOAA assume the responsibility for determining the biologically acceptable catch (ABC) for each managed fishery. By ABC the Study meant the total allowable removals from the resource that would maintain a healthy and productive resource into the future. As used in this context, the ABC would be the maximum allowable quota for the species or species complex in the fishery. It should be noted that this is different from the manner in which the term ABC is used in the guidelines for national standard 1 as revised (§ 602.11). 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/National Marine Fisheries Service (NMFS) pre-publication review and comment a draft revision of the uniform standards governing the organization, practices, and procedures of the Councils and the guidelines for FMPs. That draft revision included a section providing that a maximum fishing mortality (MFM) be established that 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. Again, ABC was to be used as a maximum allowable annual quota for the fishery. Council and NOAA 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 NOAA fishery scientists and managers, and academic scientists recommended by the Councils, to address the Study's recommendations for a conservation standard and the comments on the April draft. In October 1987, to allow time for a thorough examination of the issues raised by the workshop, the decision was made to separate the revisions concerning the conservation standard from the revisions of the uniform standards governing the organization, practices, and procedures of the Councils. In the spring of 1988, a series of Council/NMFS regional workshops was held to discuss the feasibility of the conservation standard concept, using as a basis for discussion the proposed revision of guidelines for national standards 1 and 2 produced by the August 1987 technical workshop. Following the workshops, the proposed revision was further modified as the basis for discussion at a Council Chairmen's meeting in July 1988.

The proposed rule, published at 53 FR 53031 on December 30, 1988, thus constituted the fourth revision—the product of intensive and iterative Council/NOAA review, debate, and drafting. This internal process helped identify, reduce, or eliminate many policy and operational problems before publication of the regulatory proposal. Public comments were invited on the proposed rule until February 28, 1989.

Overview of Issues

Two preliminary issue discussions follow. The first reflects issues identified and taken into account at different times in the Council/NOAA process prior to publication of the proposed rule. The

second describes the broad issues raised by public comments received following publication of the proposed rule. Two intrinsic approaches to the proposed rule—that of the decisionmaker and that of the user groups affected by the decisions—are thus displayed together. Individual public comments are addressed in the separate comments-and-response section.

1. Issues identified in various drafts and debated at the Council/NOAA workshops and Council Chairmen's meetings primarily derived from the need for flexibility. It became clear (a) that no rigid or universal overfishing definition could be applied to the great number of diverse species under management; and (b) that the ABC concept is not accepted by, or useful to, all Councils.

A few Councils expressed concern that identification of thresholds might serve to establish targets for harvest rather than provide for protection of resources. This concern was consistent with the need expressed by some other Councils to: (a) Identify measurable "conditions of concern" for each stock, with monitoring and review procedures; (b) permit conservative approaches, such as establishing an optimum yield (OY) "reserve," releasable to domestic or foreign fishermen as necessary, to solve operational problems and allow for uncertainties in stock estimates; and (c) retain an ability to take appropriate restrictive management actions at stock levels above the threshold.

2. Sixteen comments were received from outside NOAA: three Councils, two States (including two from different departments of the same State), two Federal agencies, one commercial fishing industry association, three recreational fishing associations, one professional association, and three individuals. The comments reflect varying approaches to, and awareness of, the changes in biological, economic, social, ecological, and political reality that have taken place since the Act took effect.

In broad terms, the issues raised by the commenters centered on the relationship of overfishing to OY, and, by inference, to other national standards (standard 3—management units, standard 4—allocations, and standard 6—variations and contingencies). It was clear that management of bycatch (incidental take, non-targeted species) was a troublesome issue in its effect on the resource (overfishing) and on the fishery (OY). Some commenters wanted more emphasis on economic measurement, on habitat, on sociological considerations, on non-consumptive uses, or on the administrative record to support management decisions. The ABC concept was questioned by some and demanded by others. Timing of the Stock Assessment and Fishery Evaluation (SAFE) effort also caused concern.

Commenters, in a few cases, may have been unfamiliar with (a) recent amendments to the Act, (b) the full set of guidelines (published in February 1983, codified at 50 CFR Part 602), or (c) supplementary guidance published in other than regulatory form (*Operational Guidelines—the Fishery Management Process,* last revised in February 1988). Republishing the national standard guidelines in their entirety here is intended to provide the public a fuller understanding of the interrelationships among the standards and of the broader basis on which FMPs are reviewed. The statutory language of each standard is presented as paragraph (a) under the appropriate section of the guidelines.

Overview of Approach

Certain principles instructed the revision throughout: flexibility, integrity, consistency. In addition, it should be reiterated that the effort was generated in response to the need, articulated by the 1986 Fishery Management Study and others, for a conservation standard. Consequently, the emphasis was on the resource, not its allocation. The revision focused on the definition of overfishing, not on OY. The guidelines, as revised, do not change the relationship between the two: the prevention of overfishing is an inherent limitation on OY; however, exceeding OY does not necessarily constitute overfishing. If a stock is in good condition, the specification of OY may serve various goals besides prevention of overfishing. Exceeding the OY may interfere with achievement of those goals but not affect the reproductive potential of the stock. On the other hand, if OY is the amount of fish that can safely be removed from the stock from a biological standpoint, exceeding OY may well constitute overfishing. The SAFE document(s) (which would ideally include all the types of data necessary for the determination of OY as prescribed by the Act) is intended to provide the basis for the Council's treatment of the overfishing/OY relationship. Councils have always been free to define overfishing as exceeding OY, but under the revised guidelines an overfishing definition and its justification are subject to review by the Secretary under the criteria described in § 602.11(c)(5).

The guidelines seek as much precision as possible in the use of the words "should" and "must". Section 602.2(c) states that "must" is used to denote an obligation to act and is used primarily when referring to requirements of the Act, the logical extension thereof, or other applicable law. "Should" is used to indicate that an action or consideration is strongly recommended to fulfill the Secretary's interpretation of the Act, and is a factor that reviewers will look for in evaluating an FMP.

The guidelines seek to provide options rather than establish requirements. Lists are not exclusive; they provide examples or illustrations of the kind of information, discussion, or examination/analysis useful in demonstrating consistency with the standard in question.

The guidelines seek to avoid universal application of a specific provision, except as required by law, so that the maximum accommodation to regional or individual fishery characteristics can be achieved within the standards.

In summary, the guidelines are intended as an aid to decisionmaking, with responsible conservation and management of a valued national resource as the goal. NOAA's response to the comments was (a) to maintain policy decisions of the proposed rule since they had evolved, for the most part, from commments and recommendations discussed widely at various public meetings and workshops, (b) to reevaluate and try to balance divergent points of view, and (c) to clarify ambiguities. Many of the changes in the final guidelines are, in fact, refinements and clarifications, and as such, are not necessarily addressed individually in the body of the comments-and-response section.

Section 602.11(c) was reorganized in the final rule, though not changed substantively. The subparagraphs under paragraph 602.11(c)(2) and the last half of § 602.11(c)(7) were moved to a new § 602.11(c)(6) describing how an FMP must or may prescribe measures to prevent overfishing under different circumstances. The first half of § 602.11(c)(7) became § 602.11(c)(3); §§ 602.11(c)(3)–(c)(8) were renumbered as §§ 602.11(c)(4)–(c)(9).

The national standard guidelines published in 1983 at 50 CFR Part 602 included explanatory material as Appendix A to Subpart B. NOAA has chosen to republish that Appendix here with some modification of those sections relevant to this revision of §§ 602.11 and 602.12. The purpose of the Appendix is to preserve, as codified reference, useful explanatory material and supplementary policy rationale originally published as preamble to the

various editions of proposed and final 602 rules. Preambles are not codified in the Code of Federal Regulations (CFR). Parts of this preamble are therefore repeated in the Appendix so that the rationale for the changes will be available in the CFR for future reference.

Overview of Policy

Section 602.11 sets forth a comprehensive overfishing concept within which each Council must establish 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 a reasonable period of time is unacceptable, and that fishing on a stock at a level that severely compromises that stock's future productivity is counter to the goals of the Act. As used in this revision, ABC is not meant as a quota for the fishery, but rather, may be used as a step in deriving OY from maximum sustainable yield (MSY). (See § 602.11(e).) In this context, the ABC is set by a Council, not NOAA. Since the ABC concept is not necessarily applicable to all fisheries, Councils may establish an ABC level, but are not required to do so.

Councils are provided with the flexibility needed to develop a definition of overfishing appropriate to the individual stock or species characteristics, as long as it is defined in a way that allows the Councils and the Secretary to evaluate the condition of the stock relative to the definition.

A phase-in schedule for implementation is included. General criteria are set forth as a basis for Secretarial review of the definition; these criteria address the overfishing definition specifically and do not change the Secretary's obligation to review FMPs/amendments for consistency with all the national standards, the Act, and other applicable law.

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. Councils are encouraged to identify such conditions. If these conditions are realized in a particular fishery, the best scientific advice may conclude that immediate remedial action should be taken. (See Appendix A to Subpart B of the guidelines for a fuller discussion.)

As management regimes become more comprehensive, the interrelationships of fishing pressures on target and non-target (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 non-targeted fishing, discards, and illegal catch. 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. (See §§ 602.11(c)(6) and (c)(7)(i).) Allowance has been made for the establishment and release of OY reserves to accommodate uncertainties in estimates of stock size or to solve operational problems.

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 not only for the fishery but for the Nation. Although fishing any stock to the extent that it requires protection under the Endangered Species Act (ESA) must 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. (See comment #19 and Appendix A to Subpart B for a fuller discussion of protection of non-targeted stock in a mixed species fishery.)

Section 602.12(e) describes a SAFE document or set of documents prepared or aggregated periodically, whereby Councils can obtain an objective overview of the best available information on the status of stocks and fisheries under management. Several Councils currently produce such fishery reviews, which generally provide the kinds of information suggested in the SAFE report. The SAFE report does not necessarily call for new information or new procedures; the intent is to provide, in one reference, an aggregation or a summary of the best biological, social, economic, and ecological 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. Such a report can provide a useful tracking tool for assessing the relative achievement of FMP objectives by establishing a time-series data base indicating the relative health of stocks and the industry dependent on them.

While the Secretary has the responsibility for assuring that the SAFE report is produced, it is not intended to be exclusively authored by NOAA. The report can be produced by any combination of talent from academic, government, or other sources. The report should be reviewed annually, but is not required to be revised annually except as there have been new developments or significant changes in a fishery (see §§ 602.12 (b) and (d), and § 602.13(d)(2)). Appendix A to Subpart B gives examples of the types of information/data that are useful to the Council for its decisions. No one piece of information is mandatory, but the report should contain the best available information appropriate to the fishery, taking into consideration the need to establish priorities within budget constraints.

Comments and Response.

Section 602.11 Standard 1

1. *Comment:* One commenter felt that national standard 1 should not seek to obtain optimum yield for the "United States fishing industry" (§ 602.11(a)), but rather, seek to provide the greatest overall benefit to the Nation.

Response: No change was made. The language of national standard 1 is statutory (section 301(a)(1) of the Act). The Act was amended by Pub. L. 98–623 to highlight contemporaneous policy that the greatest benefit to the Nation would accrue from U.S., rather than foreign, fisheries.

2. *Comment:* Several commenters expressed concern about the general effect of a stated conservation standard on OY. One felt that protection against overfishing might be so constrained that appropriate harvest, under MSY and OY, would not be permitted. Another worried that defining overfishing only in terms of MSY was too narrow and did not include the concept of jeopardizing the ability of a stock to continue to yield food production and recreational opportunities (values identified in the Act as a part of the definition of OY). A third wanted to add language to the criteria for Secretarial approval of a Council definition to assure an optimum harvest to fulfill the [OY] "standard of food production."

Response: No change was made. These comments emphasize protection of the harvest rather than the resource, addressing allocation questions rather than overfishing. In providing a general definition of overfishing, NOAA did not change the statutory relationship of overfishing to OY. (NOAA's concept of the relationship of overfishing to OY is more fully described in the section of the

preamble headed "Overview of approach," in the Appendix to Subpart B, and in § 602.11(g) of the guidelines.)

Under the revised guidelines, Councils will be developing a definition for overfishing specific to the stocks or stock complexes in each of the FMPs. The development of such a definition is a public process, and once proposed, the definition and its basis are subject to review and approval by the Secretary under the criteria described in § 602.11(c)(5). These criteria address resource rather than allocation issues. (See "Overview of policy" section.)

3. *Comment:* One commenter suggested that overfishing be defined as any level of fishing that jeopardizes a stock's ability to remain at levels that yield OY; another proposed that ability to sustain OY be the measure of overfishing.

Response: No change was made. Councils are free to define overfishing for each stock or stock complex under management as is justified by the best available scientific information. (See response to comments #2 and #4.)

4. *Comment:* Another facet of the relationship of overfishing to OY was illustrated by a comment urging that overfishing be defined as the level or rate of fishing mortality that reduces the target stock, or a population dependent upon it, below the OY level or to a level from which either is unable to recover to its pre-exploitation size in a specified time.

Response: No change was made. The guidelines do not preclude the Councils from defining overfishing as exceeding OY or from specifying a timeframe for rebuilding of a stock; the guidelines are not intended to direct how a Council defines overfishing. NOAA believes that no universal definition or approach can be applied to every fishery. The guidelines do provide that individual FMP overfishing definitions for fishery management units, developed by the Council and approved by the Secretary, must be in place within 18 months from the effective date of the guidelines and thereafter. (See response to comments #2 and #3.)

NOAA believes that the commenter's suggestion to extend the overfishing definition to include a population dependent upon the target stock goes beyond the intent of the Act. Consideration of predator-prey relationships is already a necessary part of the determination of OY (see § 602.11(f)(3)). In addition, provisions of the ESA and Marine Mammal Protection Act (MMPA) are among the other applicable law that must be considered by the Councils in developing FMPs. While the provisions of the MMPA place no specific obligations on the Councils, a Council is expected to provide adequate information in FMPs and related National Environmental Policy Act (NEPA) documents to inform the Secretary of any potential problems in the interaction of the fishery under management with marine mammal populations (see *Operational Guidelines*, Feb. 1988 revision). The Secretary has the responsibility to ensure that the provisions of the MMPA are carried out.

5. *Comment:* One commenter objected to the use of the term MSY in the general definition of overfishing in § 602.11(c)(1), preferring the terms "maximum biological yield" and "maximum economic value" as used in the original text of the 1983 guidelines.

Response: No change was made. NOAA was persuaded during the Council/NOAA workshops that the term "MSY" more accurately reflects the emphasis of the current revision on the relative abundance of living resource populations in response to fishing. NOAA recognizes past controversy concerning MSY as a management goal. However, it is used in the Act as the baseline tool in the determination of OY and, as such, is the underlying biological rationale upon which most determinations of OY rest.

6. *Comment:* One commenter suggested that the phrase "long-term" should be deleted from the first sentence of § 602.11(c)(1). The commenter argued that the term is undefined and that, given the presence of the qualifying phrase "on a continuing basis," it is redundant as well.

Response: No change was made. A catch equal to MSY may often be harvested for a short time, even from a severely depleted stock. Thus, this paragraph's use of the phrase "on a continuing basis" is significant. It is important to note that the phrase "long-term" is not used to qualify the production of MSY on a continuing basis (which would be redundant), but rather to qualify a stock's capacity to produce MSY on a continuing basis. NOAA believes that it is possible for a stock to lack the short-term capacity to produce MSY on a continuing basis without being overfished in the sense of the Act. For example, a temporarily depleted stock could become decimated if managers attempted to institute an immediate and sustained program of harvesting at the MSY level. The same stock, however, might retain the long-term capacity to sustain such a harvest program, *i.e.*, given an appropriate fishing mortality rate, the stock could rebuild to a level at which it could produce MSY on a continuing basis. As distinguished from temporary depletion, then, overfishing refers to those cases in which a stock's long-term capacity to produce MSY on a continuing basis is jeopardized.

7. *Comment:* Instead of allowing specific overfishing definitions to be developed in terms of a threshold biomass, maximum fishing mortality level, or other measurable standard, one commenter suggested that the guidelines should require specification of a threshold biomass for each fishery. The commenter argued that, without a threshold biomass, stocks will inevitably be overfished.

Response: No change was made. The language of proposed § 602.11(c)(4), now § 602.11(c)(5), makes clear that any specific overfishing definition developed under this section must be sufficient to prevent the stock from being overfished. Given this, NOAA does not believe it necessary to mandate a particular form for all specific overfishing definitions. In particular, for stocks whose biomass cannot be estimated reliably, it is difficult either to define a threshold biomass or to determine when such a threshold has been violated. In addition, § 602.11(c)(6) describes how an FMP must or may prescribe measures to prevent overfishing under the circumstances relevant to the form of the definition and the objectives of the FMP.

8. *Comment:* One commenter noted that it is sometimes difficult to define a threshold biomass, especially in the case of transboundary stocks or stocks exploited in a multispecies fishery.

Response: No change was made. The commenter is correct, and has pinpointed the reason that the guidelines allow for other forms of specific overfishing definitions. The general problems associated with management of transboundary stocks are also addressed in the guidelines for national standard 3 (§ 602.13).

9. *Comment:* One commenter suggested that the requirement for specifying an acceptable rebuilding time for overfished stocks is unrealistic when recruitment is uncertain.

Response: No change was made. NOAA recognizes that uncertainty involving any parameter will tend to make estimates of rebuilding time correspondingly uncertain. However, this fact does not remove the requirement to proceed with rebuilding at a reasonable rate. If a stock becomes overfished, national standard 1 implies that some sort of rebuilding program will be necessary. If left unconstrained, the rate of rebuilding theoretically could range between zero and the rate

corresponding to complete cessation of fishing. However, a rate near zero would obviously be incompatible with the intent of the Act. A Council and the Secretary should be able to agree on some higher rebuilding rate that is consistent with national standard 1 as well as with the objectives of the FMP in question.

10. *Comment:* One commenter objected to the use of "should" in proposed § 602.11(c)(2), with reference to Council actions when a stock or stock complex is approaching an overfished condition. The commenter felt it not in the spirit of standard 1 to leave addressing this issue to Council discretion.

Response: NOAA agrees in principle, and has moved this paragraph to a new section addressing actions of the Council to prevent overfishing (§ 602.11(c)(6)). No change was made in the wording, however, because circumstances surrounding such an event are time-dependent and may call for a range of management measures difficult to include prospectively in an FMP beyond the intention to reduce fishing mortality. One of the purposes of the SAFE document(s) is to provide a tracking tool for the status of the stocks. In addition, under certain conditions, the use of framework management measures, which provide the public with advance notice of potential responses to specific conditions, assist in quick action when necessary. (See guidelines for national standard 6, § 602.16, and Phase V of the *Operational Guidelines*, 1983.)

11. *Comment:* One commenter suggested deleting the word "targeted" from proposed § 602.11(c)(2), suggesting that, as written, the paragraph would allow a Council to avoid managing bycatch and discard levels that could be significant contributors to overfishing.

Response: NOAA did not intend to allow this, and has deleted "targeted", as requested. (See "Overview of policy" section, Appendix A to Subpart B, and responses to comments #14 and #19 for a further discussion of bycatch and sources of fishing mortality.)

12. *Comment:* One commenter suggested that the guidance to the Council be changed to provide detailed population dynamics descriptions of the factors involved in the various rates, such as natural mortality, etc.

Response: No change was made. This guidance would not be required, as such material would be available in the SAFE documentation.

13. *Comment:* One commenter recommended including a mandate to take action to control habitat degradation.

Response: Habitat needs are recognized as critical to recruitment, but they are more appropriately addressed in other areas of the Council's responsibility and are not directly related to the definition of overfishing. However, proposed § 602.11(c)(5), which is now found at § 602.11(c)(7), addresses alterations in environment/habitat conditions. It was modified to reference the new discretionary responsibilities of the Councils under section 302(i) of the Act concerning the effect of activities undertaken by any State or Federal agency that may affect fisheries under Council authority.

14. *Comment:* It was suggested that the words "targeted effort" in proposed § 602.11(c)(2)(iii) be changed to "harvest."

Response: The word "targeted" has been deleted because measures to address overfishing need to consider all sources of fishing mortality. The word "effort" was retained as it more directly relates to fishing mortality. Harvest usually refers only to fish landed and does not include discard mortality. (See "Overview of policy" section.)

15. *Comment:* A commenter suggested that "should" be changed to "must" in the second sentence of proposed § 602.11(c)(3) so that it would read, "Councils must build into the definition appropriate consideration of risk."

Response: NOAA accepts this suggestion as being consistent with the requirements of national standard 6, and with the intent of this revision to emphasize conservation.

16. *Comment:* One commenter requested that language be added to proposed § 602.11(c)(3) to require that the record be clear (a) on the factors considered in arriving at a Council's judgment in cases where scientific data are severely limited, and (b) on any efforts made to include time specific milestones to identify and gather the needed data on which informed decisions could be made.

Response: NOAA agrees that Council decisions should be publicly documented. However, no change in language was made here. The guidelines for national standard 7 (§ 602.17) and the requirements of NEPA and E.O. 12291 provide the relevant direction on the questions of analysis and public record. (See the response to comment #37 on the general question of timeliness of data.)

17. *Comment:* The same commenter wished to add similar language to proposed § 602.11(c)(4) to ensure that the decision elements of Secretarial approval or disapproval be made a part of the record of the FMP.

Response: No change was made. The Secretary's consideration of the elements in § 602.11(c)(4), which is now found at § 602.11(c)(5), will be part of the administrative record for the FMP or amendment.

18. *Comment:* One commenter was concerned that the criteria for Secretarial approval include consideration of Indian Treaty rights as stated in the Act.

Response: This comment brought to NOAA's attention the ambiguity of this section as proposed. The first sentence has been redrafted to read, "Secretarial approval or disapproval *of the definition of overfishing* will be based on * * *". Consideration of Indian Treaty rights as a factor in developing FMPs is unaffected by these revisions to § 602.11; supplementary guidance is available in the *Operations Guidelines*, Feb. 1988 revision. (See "Overview of policy" section.)

19. *Comment:* Four commenters noted an apparent inconsistency between the mandate to prevent overfishing and the exception in proposed § 602.11(c)(6) that would allow overfishing of certain stocks. One suggested that this is "bycatch" overfishing and should be identified as such. Another contended that the risk of overfishing the bycatch species should determine the allowable fishing effort on the primary species. The fourth commenter suggested that any bycatch that reduces food supplies and thereby indirectly causes marine mammals, birds, or other species to be reduced below their optimum sustainable level also should constitute overfishing under the Act.

Response: No change was made. This paragraph does not allow overfishing of any species for commercial reasons in violation of national standard 1, and does not indicate lack of concern for individual populations within a fishery management unit (FMU). Rather, the intent of this paragraph is to allow mixed species fishing under certain conditions. First, the deliberate overfishing of a "minor stock component" must be identified. Second, the excepted type of overfishing must be demonstrated by analysis to result in net benefits not only to the fishery but to the Nation. This analysis should indicate who would benefit, who would suffer losses and to what extent (in quantitative terms, if possible), and why such overfishing is warranted. Finally, it must be demonstrated that the excepted overfishing would not cause any stock component, regardless of FMU, to require protection under the ESA. (See "Overview of policy" section and Appendix A to Subpart B.)

NOAA does not agree that the excepted type of overfishing should be labeled bycatch overfishing because it confuses different forms of bycatch mortality. For example, the term bycatch may apply to species caught out of season, catches of an undesired sex of a species or at a time when product recovery rates are low, or prohibited species catches.

Causing the depletion of any species of marine mammals is not authorized by this section. (See response to comment #4 for discussion of predator/prey relationships, of the general relationship between the MMPA and the Magnuson Act and of the Councils' need to be cognizant of the interaction of fishery management with marine mammal populations.)

20. *Comment:* One commenter complained that proposed § 602.11(c)(7) apparently proscribed designation of "growth" or "pulse" overfishing as overfishing under national standard 1. Another wished to delete reference to "pulse" fishing entirely, and two commenters suggested that "growth", "localized", or "pulse" overfishing should be recognized as overfishing under national standard 1 if they tend to preclude achievement of OY.

Response: No change was made. This paragraph (now designated as § 602.11(c)(3)) states simply that these fishing patterns do not necessarily constitute overfishing under national standard 1, which the guidelines define generally as a rate of fishing that jeopardizes the long-term capacity of a stock or stock complex to produce MSY on a continuing basis. To the extent that it satisfies this general definition in particular cases, either "growth" or "pulse" overfishing may constitute overfishing under national standard 1. For example, "growth" overfishing could qualify as overfishing under national standard 1 if it resulted in the removal of too many fish before they are old enough to spawn. In the case of either "growth" or "pulse" overfishing, the key point is not so much the pattern of fishing (*e.g.*, pulse vs. sustained) as the rate of fishing mortality and its effect on the long-term capacity of the stock to produce MSY. 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 § 602.11(c)(6)(v) and Appendix A to Subpart B.)

Although the guidelines acknowledge that the specified fishing patterns may constitute overfishing under national standard 1 in particular cases, it should be noted that this would occur only when such patterns jeopardized the long-term capacity of a stock or stock complex to produce MSY on a continuing basis, not simply because they tended to preclude achievement of OY. Although it is theoretically possible for the prevention of overfishing to coincide with the achievement of OY, national standard 1 distinguishes between the two. That distinction is maintained in the guidelines.

21. *Comment:* In the proposed rule, NOAA specifically solicited comment on the implementation provisions. One commenter wanted to ensure a time certain for submissions of amendments to existing FMPs; another wanted to make sure that all FMPs were included in the requirement for an overfishing definition, existing and future. In addition, at the Council Chairmen's meeting on January 27–28, 1989, the Chairmen made some recommendations regarding the phase-in schedule: (a) That the 18-month implementation date be retained; (b) that any FMP or amendment in progress at the time of the effective date of the revised rule must include a definition of overfishing; (c) that within 3 months of the effective date, each Council advise the Secretary of its intent to comply, and if, in its opinion, any FMP is currently consistent with the provisions of § 602.11(c) without amendment; (d) that within 12 months of the effective date, the Secretary review such FMP and notify the Council of concurrence or disagreement; and (e) that within 15 months of the effective date, each Council submit an amendment to any FMP not currently consistent with the provisions of § 602.11(c) to bring it into compliance.

Response: Section 602.11(c)(8) is revised to accommodate all the commenters' recommendations, except that the time for Secretarial review and notification to a Council regarding concurrence or disagreement with its opinion as to consistency is reduced from 12 months from the effective date to 3 months from receipt of a Council's letter of advice. This allows Councils more time to develop amendments as necessary before the 18-month implementation date.

22. *Comment:* Two commenters suggested that paragraph 602.11(e) should include an explicit statement of the relationship between ABC and overfishing.

Response: No change was made. The paragraph states that ABC must be "acceptable"; therefore, ABC can never imply a harvest level that would constitute overfishing. In particular, when overfishing is defined in terms of a threshold, the paragraph makes clear that ABC must equal zero whenever the threshold is violated.

23. *Comment:* Two commenters suggested that specification of ABC should be mandatory for each stock covered by an FMP.

Response: No change was made. Since ABC is not mentioned in the Act, its specification is viewed only as one possible step in the process of preventing overfishing while achieving OY. NOAA's aim in drafting this section was to reflect how ABC is defined and used by those Councils that currently employ the concept.

24. *Comment:* Two commenters suggested that paragraph 602.11(e) incorporate language requiring the use of conservative estimates, by choosing either the scientific parameter estimates that yield the lowest reasonable value of ABC, or the lowest reasonable estimates of the parameters listed in the second sentence of § 602.11(e)(2).

Response: No change was made. Since the Councils that currently employ the ABC concept do not require the use of conservative estimates, such language is not included in this section (see response to comment #23). Since ABC is used as a step in determining OY and consequent management measures, its specification is susceptible to the requirements of national standard 6 to consider uncertainty in parameter estimates.

25. *Comment:* One commenter wanted to change the definition of OY to include benefits other than food production and recreational opportunities.

Response: No change was made. The definition of OY at § 602.11(f)(1) is the statutory definition and includes other modifiers—economic, social, or ecological factors. (Also see § 602.11(f)(3).)

26. *Comment:* A Council suggested deletion of the phrase "at reasonable prices" from the goal of providing seafood to consumers in § 602.11(f)(2)(i). The commenter considered the goal unrealistic since forces such as international markets, which are beyond a Council's purview, control consumer prices.

Response: NOAA agrees, and has deleted the phrase.

27. *Comment:* In § 602.11(f)(3), a commenter suggested removing the example of a factor that might not be relevant in every fishery.

Response: NOAA has deleted the phrase "for instance, there may be no Indian treaty rights".

28. *Comment:* A commenter wanted to emphasize the value of both commercial

and recreational fisheries as economic factors in § 602.11(f)(3)(i).

Response: NOAA accommodated this comment by deleting the adjective "industrial" so that the value of all types of fisheries is listed.

29. *Comment:* Several commenters had suggestions for additional social factors to be listed in § 602.11(f)(3)(ii).

Response: No change was made. This paragraph contains examples; the list is not meant to be exclusive.

30. *Comment:* A commenter requested an addition to § 602.11(f)(4) to address the possibility of a closure before the end of a fishing season. The comment proposed inclusion of an OY reserve and suballocations of quotas as part of the OY specification. Such measures would preclude fishermen in one geographic location from harvesting the entire quota and denying fishing opportunities to fishermen in a different geographic location. Two commenters sought inclusion of the allocative reserve concept in § 602.11(g)(3) to serve the same purpose.

Response: No change was made. NOAA agrees that OY reserves and geographic suballocations are useful management measures. The problems they address fall under the allocation concerns of national standard 4 and are covered by the guidelines at § 602.14.

31. *Comment:* The word "multiyear" in § 602.11(f)(4)(iv) was considered superfluous by one commenter, who noted that all FMPs are now multiyear.

Response: NOAA agrees, and has deleted the word "multiyear."

32. *Comment:* Two commenters objected to the allusion to a "fabricated MSY" in § 602.11(f)(4)(v).

Response: NOAA deleted the phrase as misleading. The Act does require that OY be derived from MSY; however, NOAA recognizes that there are cases where the specification of MSY may be either impossible or irrelevant. This may be due to lack of assessment data (as in minor components of a mixed-species fishery), or because biological resiliency or high fecundity of some stocks or other fishery characteristic may allow OY to become a descriptive statement only, making a numerical calculation of MSY unnecessary. Nevertheless, NOAA wants to emphasize that OY must still be derived from biological information, as for example, the proportional abundance of associated species.

33. *Comment:* One commenter asked whether the analysis required by § 602.11(f)(5) is part of the FMP at the time it is first submitted for public review.

Response: The answer is yes.

34. *Comment:* A commenter questioned who would judge the requirement in § 602.11(g)(1) that management measures be enforceable; the Council does not want "existing and arguably outmoded enforcement capabilities" to control the Council's choice of management measures.

Response: The Department of Commerce and the Coast Guard are charged with enforcement of fishery regulations. Their judgments about the practicality and effectiveness of proposed management measures in terms of enforceability should be given serious consideration by the Councils. Guidance may be found in Part V of the *MFCMA Handbook*.

Section 602.12 Standard 2

35. *Comment:* A commenter noted that annual SAFE reports for some fisheries may not be necessary as the rate of change in the resource may be slow.

Response: No change was made. Accumulation of new information on any resource may be slow and not indicate a need for an annual SAFE report. This is why NOAA proposed at § 602.12(e)(1)(i) that the SAFE report be reviewed at least annually to determine if updating or changing it in any way is warranted.

36. *Comment:* One commenter complained that the guidelines were unclear on who determines the membership of the "SAFE panel," while another saw no need to require Council and NMFS representatives on any team charged with drafting a SAFE report.

Response: The periodic production of SAFE reports as proposed contemplated no SAFE panel or committee *per se*. Councils and their associated NMFS Regional Offices may determine how best to acquire and analyze data and write the report. Any combination of talent from Council, State, university, Federal or other sources may be used for this purpose. NOAA agrees, therefore, that since there is no need to require representatives of any specific group on a SAFE report drafting team, the parenthetical phrase "(but at a minimum must include Council and NMFS representatives)" is unnecessary and has deleted it.

37. *Comment:* Some commenters suggested that SAFE reports should be prepared at least 6 months prior to the beginning of a fishing year to allow time for the rulemaking process to use the report as a technical basis for regulations that must be in place at the beginning of the fishing year.

Response: No change was made. Timeliness is part of the information objective of the SAFE report. Ideally, the most recent edition of a SAFE report, with the most current data, should be available to a Council in time for their determination of harvest levels or OYs for any fishing year. However, publication of a SAFE report 6 months in advance of this time may obviate use of the best available information. For example, if 5 or 6 months are necessary to do fish stock and industry surveys and analyses of the resulting data, requiring the summary of these data 6 months prior to a Council's determination of harvest levels will assure that this determination will be based on data that are about a year old when they are used and prevent the use of any more recent analyses, if available. This would place the Council in a position of managing next year's fishery with last year's data when some data from the current year also may be available. For this reason, the guidelines do not impose specific timeliness criteria on the production of SAFE reports. Deadlines for the completion of these reports are better set by the Councils in consultation with NMFS and other scientists who are most familiar with the production and analysis of fishery data for making management decisions.

38. *Comment:* Several commenters expressed concern with the contents of the SAFE report. Some comments expressed a need for more specific attention for marine recreational fisheries and non-consumptive users of fishery resources in the suggested list of types of information for inclusion in SAFE reports. For example, some reviewers thought that the term "recreational fishing industries" excluded such non-consumptive activities as photography, diving, research, having a recreational fishing experience, and other aesthetic uses. Other comments focused on a need to include more economic descriptors such as demand curves for recreational fishing and each commercial fishing product, estimates of producer and consumer surplus for recreational and commercial fisheries, and economic or catch rate threshold levels at which fishermen will choose to enter or leave a fishery. Some comments suggested inclusion of more biological information. One comment criticized the suggested SAFE report contents as failing to link the report to the specification of overfishing required under § 602.11(c). The commenter wrote that the report should focus on a determination of fishing mortality rate and stock conditions relative to the specific criteria for overfishing. Another commenter stated that the report must include assessments of how fisheries affect and are affected by marine

mammals, birds, and other non-target species.

Response: The kinds of data or information that NOAA contemplated in proposing the SAFE report are those that are necessary for understanding the biological condition of the harvested fish stock and the socioeconomic condition of the persons or businesses that rely on such harvests. NOAA listed some types of data that may be useful for this purpose by way of example. Recognizing that such a listing within the body of the guideline text might be perceived as mandatory or exclusive, NOAA moved the language describing examples of SAFE information to the Appendix. Thus, it should be clear that the lists (a) are not mandatory; (b) are not intended to be exclusive of other kinds of data that may have particular pertinence in certain areas; additional types of information—such as those recommended for inclusion in SAFE reports by the commenters—may be included if needed and available.

NOAA agrees that emphasis appears to be placed on commercial and extractive uses of marine fisheries. Therefore, in § 602.12(e)(1), the phrase "the recreational and commercial fishing industries" has been changed to read "recreational and commercial interests," and the appropriate Appendix language describing examples of SAFE information was modified accordingly. NOAA also agrees that to insert "commercially" before "harvested" (in what is now found in Appendix A to Subpart B under paragraph (2)(b) of the SAFE Report section) clarifies an ambiguity.

Essentially, any kind of information needed by a Council and the Secretary for periodic understanding of the state of the fishery would be appropriate for inclusion in a SAFE report. NOAA cautions, however, that while SAFE reports should present comprehensive and synoptic information on a fishery, they need not be encyclopedic. SAFE reports should present objective, scientifically based information relevant to the fishery.

To satisfy the purposes of the SAFE report, NOAA intends to allow maximum flexibility to Councils, in cooperation with the appropriate NMFS Regions and Centers, to develop the contents and organization of SAFE reports in the most reasonable or logical way for the fisheries being described. This may or may not include a discussion on how close a fishery is to a condition of being overfished.

39. *Comment:* One commenter was concerned about the identification of data deficiencies and suggested that SAFE reports recommend ways to resolve such deficiencies and a priority for securing identified data needs.

Response: No change was made. A discussion of data needs may be included if deemed necessary for making management decisions. Such discussions may be more relevant in a separate document, however, as the SAFE report is intended to display a synopsis of known or existing information over time.

Classification

The Under Secretary of Commerce for Oceans and Atmosphere has determined that this rule is not a "major rule" requiring a regulatory impact analysis under E.O. 12291. The guidelines indicate how NOAA interprets the fishery management principles in the national standards of the Magnuson Act. They describe a range of acceptable management measures that could be adopted by the Councils, approved by the Secretary, and subsequently translated into regulations. The impact upon the public occurs through specific management measures contained within specific FMPs; until a specific FMP is developed, there is no basis for evaluating the consequences of these guidelines.

The General Counsel of the Department of Commerce has certified to the Small Business Administration that this rule, if adopted, will not have a significant economic impact on a substantial number of small entities. As a result, a regulatory flexibility analysis (RFA) was not prepared. Any economic impacts on small entities will be addressed through RFAs for individual FMPs.

These amendments to the national standard guidelines do not themselves affect the human environment. Thus, NOAA has determined that no environmental impact statement (EIS) or environmental assessment (EA) is required. FMPs and FMP amendments developed as a result of these guidelines will require EISs or EAs.

This rule contains no collection-of-information requirements subject to the Paperwork Reduction Act.

Because the guidelines will have no direct regulatory impact upon the public, NOAA has determined that this rule does not directly affect the coastal zone of any State with an approved coastal zone management program.

This rule does not contain policies with federalism implications sufficient to warrant preparation of a federalism assessment under E.O. 12612.

List of Subjects in 50 CFR Part 602

Fisheries, Fishing.

Dated: July 12, 1989.

James W. Brennan,

Assistant Administrator for Fisheries.

For the reasons set forth in the preamble, 50 CFR Part 602 is revised as follows:

PART 602—GUIDELINES FOR FISHERY MANAGEMENT PLANS

Subpart A—General

Sec.
602.1 Purpose and scope.
602.2 Style guide.

Subpart B—National Standards

602.10 General.
602.11 National Standard 1—Optimum Yield.
602.12 National Standard 2—Scientific information.
602.13 National Standard 3—Management Units.
602.14 National Standard 4—Allocations.
602.15 National Standard 5—Efficiency.
602.16 National Standard 6—Variations and Contingencies.
602.17 National Standard 7—Costs and Benefits.

Appendix A to Subpart B—Explanatory Material.

Authority: 16 U.S.C. 1801 *et seq.*

Subpart A—General

§ 602.1 Purpose and scope.

The Act requires that any fishery management plan or amendment prepared by either the Regional Fishery Management Councils or the Secretary of Commerce, and any regulations issued to implement a fishery management plan or amendment, shall be consistent with seven national standards, the other provisions of the Act, and any other applicable law. Part 602 implements those portions of the Act that pertain to the development, content, submission, amendment, review, and implementation of fishery management plans, and establishes guidelines to assist in achieving the required consistency.

§ 602.2 Style guide.

(a) *Definitions.* The terms used in these guidelines have the meanings that are prescribed in section 3 of the Act. In addition, the following definitions apply:

The Act—the Magnuson Fishery Conservation and Management Act, as amended (16 U.S.C. 1801 *et seq.*), also known as the FCMA, or the Magnuson Act.

Council—Regional Fishery Management Council, as established by the Act.

Secretary—Secretary of Commerce.

(b) *Abbreviations.*

ABC—acceptable biological catch.

DAH—estimated domestic annual harvest.
DAP—estimated domestic annual processing.
EY—equilibrium yield.
EEZ—exclusive economic zone.
FMP—fishery management plan.
JVP—joint venture processing.
MSY—maximum sustainable yield.
OY—optimum yield.
PMP—preliminary fishery management plan.
TAC—total allowable catch.
TALFF—total allowable level of foreign fishing.

(c) *Word usage.* (1) *Must* is used to denote an obligation to act; it is used primarily when referring to requirements of the Act, the logical extension thereof, or of other applicable law.

(2) *Should* is used to indicate that an action or consideration is strongly recommended to fulfill the Secretary's interpretation of the Act, and is a factor reviewers will look for in evaluating an FMP.

(3) *May* is used in a permissive sense.

(4) *May not* is proscriptive; it has the same force as *must not.*

(5) *Will* is used descriptively.

(6) *Shall* is not used at all, except when quoting the statutory language of each standard. "Must" is used instead of "shall" to avoid confusion with the future tense.

(7) *Could* is used when giving examples, in a hypothetical, permissive sense.

(8) *Can* is used to mean "is able to," as distinguished from "may."

(9) *Examples* are given by way of illustration and further explanation. They are not inclusive lists; they do not limit options.

(10) *Analysis,* as a paragraph heading, signals more detailed guidance as to the type of discussion and examination an FMP should contain to demonstrate compliance with the standard in question.

(11) *Determine* is used when referring to OY.

(12) *Adjust* is used when establishing a deviation from MSY for biological reasons, such as in establishing ABC, TAC, or EY.

(13) *Modify* is used when the deviation from MSY is for the purpose of determining OY, in accord with relevant economic, social, or ecological factors.

(14) *Industry* includes recreational and commercial fishing and the harvesting, processing, and marketing sectors.

Subpart B—National Standards

§ 602.10 General.

(a) *Purpose.* (1) This subpart establishes guidelines, based on the national standards, to assist in the development and review of FMPs, amendments, and regulations prepared by the Councils and the Secretary.

(2) In developing FMPs, the Councils have the initial authority to ascertain factual circumstances, to establish management objectives, and to propose management measures that will achieve the objectives. The Secretary will determine whether the proposed management objectives and measures are consistent with the national standards, other provisions of the Act, and other applicable law. The Secretary has an obligation under section 301(b) of the Act to inform the Councils of the Secretary's interpretation of the national standards so that they will have an understanding of the basis on which FMPs will be reviewed.

(3) The national standards are statutory principles that must be followed in any FMP. The guidelines summarize Secretarial interpretations that have been and will be, applied under these principles. The guidelines are intended as aids to decisionmaking; FMPs formulated according to the guidelines will have a better chance for expeditious Secretarial review, approval, and implementation. FMPs that are in substantial compliance with the guidelines, the Act, and other applicable law must be approved.

(b) *Fishery management objectives.* (1) Each FMP, whether prepared by a Council or by the Secretary, should identify what the FMP is designed to accomplish, i.e., the management objectives to be attained in regulating the fishery under consideration. In establishing objectives, Councils balance biological constraints with human needs, reconcile present and future costs and benefits, and integrate the diversity of public and private interests. If objectives are in conflict, priorities should be established among them.

(2) How objectives are defined is important to the management process. Objectives should address the problems of a particular fishery. The objectives should be clearly stated, practicably attainable, framed in terms of definable events and measurable benefits, and based upon a comprehensive rather than a fragmentary approach to the problems addressed. An FMP should make a clear distinction between objectives and the management measures chosen to achieve them. The objectives of each FMP provide the context within which the Secretary will judge the consistency of an FMP's conservation and management measures with the national standards.

§ 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 the United States fishing industry.

(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 MSY 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 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.

(3) Different fishing patterns can produce a variety of effects on local and areawide abundance, availability, size, and age composition of a stock. Some of these fishing patterns have been called "growth," "localized," or "pulse" overfishing; however, these patterns are not necessarily overfishing under the national standard 1 definition, which focuses on recruitment and long-term reproductive capacity. (Also see paragraph (c)(6)(v) of this section and Appendix A to Subpart B of this part.)

(4) Overfishing definitions must be based on the best scientific information available. Councils must 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 of this part). In cases where scientific data are severely limited, the Councils' informed judgment must be used, and effort should be directed to identifying and gathering the needed data (see §§ 602.12 and 605.14 of this part).

(5) Secretarial approval or disapproval of the overfishing definition 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.

(6) In addition to a specific definition of overfishing for each stock or stock complex, an FMP must contain management measures necessary to prevent overfishing.

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

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

(iii) 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 Council and acceptable to the Secretary.

(iv) If data indicate that a stock or stock complex is approaching an overfished condition, the Council should identify actions or combination of actions to be undertaken in response.

(v) Depending on the objectives of a particular FMP and the specific definition of overfishing established for the stock or stock complex under management, a Council may recommend measures to prevent or permit pulse, localized, or growth overfishing. (See Appendix A to Subpart B of this part for explanatory material.)

(7) Significant adverse alterations in environment/habitat conditions 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. (See Appendix A to Subpart B of this part for discussion of indicators of existing or impending overfishing.)

(i) Whether these trends are caused by environmental changes or by fishing effort, the only direct control provided by the Act is to reduce fishing mortality.

(ii) 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.

(iii) If man-made environmental changes are contributing to the downward trends, in addition to controlling effort Councils should recommend restoration of habitat and other ameliorative programs, to the extent possible, and consider whether to take action under section 302(i) of the Act.

(8) There are certain limited exceptions to the requirement of preventing overfishing. 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. 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 Nation, and if the Council's action will not cause any stock to require protection under the Endangered Species Act (ESA).

(9) After February 25, 1991, all new and existing FMPs should contain a definition of overfishing for the stock or stock complex managed under the affected FMP.

(i) An FMP or amendment being developed and not yet adopted as final by the Councils at the time these guidelines become effective should contain a definition of overfishing when submitted for approval by the Secretary.

(ii) On or before November 21, 1989, Councils should examine each existing FMP as amended and notify the Regional Director if, in the opinion of the Council, the FMP is currently consistent with the provisions of § 602.11(c) without amendment. Within 90 days of notification, the Secretary will review any such FMP for consistency with § 602.11(c), and notify the Council of concurrence or disagreement.

(iii) On or before November 23, 1990, an amendment should be prepared and submitted to the Secretary for all existing FMPs not approved under paragraph (b)(9)(ii) of this section to add a definition of overfishing for the stock or stock complex managed under the affected FMP.

(d) *MSY.* (1) MSY is 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) *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 § 602.12 of this part), ABC should be no higher than the product of the stock's natural mortality rate and the biomass of the exploitable stock. If a threshold has been specified for the stock, ABC must equal zero when the stock is at or below that threshold (see paragraph (c)(2) of this section). ABC may be expressed in numeric or nonnumeric terms.

(f) *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, 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) of the Act). Not every factor will be relevant in every fishery. 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 the value of 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 any TALFF and to analyze impacts of the management regime. There should be a mechanism in an FMP for periodic reassessment of the OY specification, so that it is responsive to changing circumstances in the fishery. (See § 602.12(e).)

(v) The determination of OY requires a specification of MSY. However, even 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 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)(8) of this section, the analysis must contain a justification in terms of overall benefits and an assessment of the risk of the species or stock component 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 an 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.

(3) 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 in achieving (but not exceeding) OY. 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.

(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) *DAP.* Each FMP must identify the capacity of U.S. processors. It must also identify the amount of DAP, which is the sum of two estimates:

(i) 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

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

(3) *JVP.* When DAH exceeds DAP, the surplus is available for JVP. JVP is derived from DAH.

§ 602.12 National Standard 2—Scientific Information.

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

(b) *FMP development.* The fact that scientific information concerning a fishery is incomplete does not prevent the preparation and implementation of an FMP (see related §§ 602.13(d)(2) and 602.17(b)).

(1) Scientific information includes, but is not limited to, information of a biological, ecological, economic, or social nature. Successful fishery management depends, in part, on the timely availability, quality, and quantity of scientific information, as well as on the thorough analysis of this information, and the extent to which the information is applied. If there are conflicting facts or opinions relevant to a particular point, a Council may choose among them, but should justify the choice.

(2) FMPs must take into account the best scientific information available at the time of preparation. Between the initial drafting of an FMP and its submission for final review, new information often becomes available. This new information should be incorporated into the final FMP where practicable; but it is unnecessary to start the FMP process over again unless the information indicates that drastic changes have occurred in the fishery that might require revision of the management objectives or measures.

(c) *FMP implementation.* (1) An FMP must specify whatever information fishermen and processors will be required or requested to submit to the Secretary. Information about harvest within State boundaries, as well as in the EEZ, may be collected if it is needed for proper implementation of the FMP and cannot be obtained otherwise. The FMP should explain the practical utility of the information specified in monitoring the fishery, in facilitating inseason management decisions, and in judging the performance of the management regime; it should also consider the effort, cost, or social impact of obtaining it.

(2) An FMP should identify scientific information needed from other sources to improve understanding and management of the resource and the fishery.

(3) The information submitted by various data suppliers about the stocks(s) throughout its range or about the fishery should be comparable and compatible, to the maximum extent possible.

(d) *FMP amendment.* FMPs should be amended on a timely basis, as new information indicates the necessity for change in objectives or management measures.

(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 commercial fishing interests 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 Councils may utilize any combination of talent from Council, State, Federal, university, or other sources to acquire and analyze data and produce the SAFE report.

(ii) The SAFE report provides information to the Councils for determining annual harvest levels from each stock, documenting significant trends or changes in the resource and fishery over time, and 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 (see Appendix A to Subpart B of this part for examples).

(3) Each SAFE report should contain information on which to assess the social and economic condition of the persons and businesses that rely on the use of fish resources, including fish processing industries (see Appendix A to Subpart B of this part for examples).

(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 (see Appendix A to Subpart B of this part for examples).

§ 602.13 National Standard 3—Management Units.

(a) *Standard 3.* To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.

(b) *General.* The purpose of this standard is to induce a comprehensive approach to fishery management. The geographic scope of the fishery, for planning purposes, should cover the entire range of the stocks(s) of fish, and not be overly constrained by political boundaries. Wherever practicable, an FMP should seek to manage interrelated stocks of fish.

(c) *Unity of management.* Cooperation and understanding among entities concerned with the fishery (e.g., Councils, States, Federal government, international commissions, foreign nations) are vital to effective management. Where management of a fishery involves multiple jurisdictions, coordination among the several entities should be sought in the development of an FMP. Where a range overlaps Council areas, one FMP to cover the entire range is preferred. The Secretary designates which Council or Councils will prepare the FMP, under section 304(f) of the Act.

(d) *Management unit.* The term "management unit" means a fishery or that portion of a fishery identified in an FMP as relevant to the FMP's management objectives.

(1) *Basis.* The choice of a management unit depends on the focus of the FMP's objectives, and may be organized around biological, geographic, economic, technical, social, or ecological perspectives. For example:

(i) *Biological*—could be based on a stock(s) throughout its range.

(ii) *Geographic*—could be an area.

(iii) *Economic*—could be based on a fishery supplying specific product forms.

(iv) *Technical*—could be based on a fishery utilizing a specific gear type or similar fishing practices.

(v) *Social*—could be based on fishermen as the unifying element, such as when the fishermen pursue different species in a regular pattern throughout the year.

(vi) *Ecological*—could be based on species that are associated in the ecosystem or are dependent on a particular habitat.

(2) *Conservation and management measures.* FMPs should include conservation and management measures for that part of the management unit within U.S. waters, although the Secretary can ordinarily implement

them only within the EEZ. The measures need not be identical for each geographic area within the management unit, if the FMP justifies the differences. A management unit may contain, in addition to regulated species, stocks of fish for which there is not enough information available to specify MSY and OY or to establish management measures, so that data on these species may be collected under the FMP.

(e) *Analysis.* To document that an FMP is as comprehensive as practicable, it should include discussions of the following:

(1) The range and distribution of the stocks, as well as the patterns of fishing effort and harvest.

(2) Alternative management units and reasons for selecting a particular one. A less-than-comprehensive management unit may be justified if, for example, complementary management exits or is planned for a separate geographic area or for a distinct use of the stocks, or if the unmanaged portion of the resource is immaterial to proper management.

(3) Management activities and habitat programs of adjacent States and their effects on the FMP's objectives and management measures. Where State action is necessary to implement measures within State waters to achieve FMP objectives, the FMP should identify what State action is necessary, discuss the consequences of State inaction or contrary action, and make appropriate recommendations. The FMP should also discuss the impact that Federal regulations will have on State management activities.

(4) Management activities of other countries having an impact on the fishery, and how the FMP's management measures are designed to take into account these impacts. International boundaries may be dealt with in several ways. For example:

(i) By limiting the management unit's scope to that portion of the stock found in U.S. waters;

(ii) By estimating MSY for the entire stock and then basing the determination of OY for the U.S. fishery on the portion of the stock within U.S. waters; or

(iii) By referring to treaties or cooperative agreements.

§ 602.14 National Standard 4—Allocations.

(a) *Standard 4.* Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be: (1) Fair and equitable to all such fishermen; (2) reasonably calculated to promote conservation; and (3) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.

(b) *Discrimination among residents of different States.* An FMP may not differentiate among U.S. citizens, nationals, resident aliens, or corporations on the basis of their State of residence. An FMP may not incorporate or rely on a State statute or regulation that discriminates against residents of another State. Conservation and management measures that have different effects on persons in various geographic locations are permissible, if they satisfy the other guidelines under standard 4. Examples of these precepts are:

(1) An FMP that restricted fishing in the EEZ to those holding a permit from State X would violate standard 4 if State X issued permits only to its own citizens.

(2) An FMP that closed a spawning ground might disadvantage fishermen living in the State closest to it, because they would have to travel farther to an open area, but the closure could be justified under standard 4 as a conservation measure with no discriminatory intent.

(c) *Allocation of fishing privileges.* An FMP may contain management measures that allocate fishing privileges if such measures are necessary or helpful in furthering legitimate objectives or in achieving the OY, and if the measures conform with paragraphs (c)(3) (i) through (iii) of this section.

(1) *Definition.* An "allocation" or "assignment" of fishing privileges is a direct and deliberate distribution of the opportunity to participate in a fishery among identifiable, discrete user groups or individuals. Any management measure (or lack of management) has incidental allocative effects, but only those measures that result in direct distributions of fishing privileges will be judged against the allocation requirements of standard 4. Adoption of an FMP that merely perpetuates existing fishing practices may result in an allocation, if those practices directly distribute the opportunity to participate in the fishery. Allocations of fishing privileges include, for example, per-vessel catch limits, quotas by vessel class and gear type, different quotas or fishing seasons for recreational and commercial fishermen, assignment of ocean areas to different gear users, and limitation of permits to a certain number of vessels or fishermen.

(2) *Analysis of allocations.* Each FMP should contain a description and analysis of the allocations existing in the fishery and of those made in the FMP. The effects of eliminating an existing allocation system should be examined. Allocation schemes considered but rejected by the Council should be included in the discussion. The analysis should relate the recommended allocations to the FMP's objectives and OY specification, and discuss the factors listed in paragraph (c)(3) of this section.

(3) *Factors in making allocations.* An allocation of fishing privileges must be fair and equitable, must be reasonably calculated to promote conservation, and must avoid excessive shares. These tests are explained in paragraphs (c)(3) (i) through (iii) of this section:

(i) *Fairness and equity.* (A) An allocation of fishing privileges should be rationally connected with the achievement of OY or with the furtherance of a legitimate FMP objective. Inherent in an allocation is the advantaging of one group to the detriment of another. The motive for making a particular allocation should be justified in terms of the objectives of the FMP; otherwise, the disadvantaged user groups or individuals would suffer without cause. For instance, an FMP objective to preserve the economic status quo cannot be achieved by excluding a group of long-time participants in the fishery. On the other hand, there is a rational connection between an objective of harvesting shrimp at their maximum size and closing a nursery area to trawling.

(B) An allocation of fishing privileges may impose a hardship on one group if it is outweighed by the total benefits received by another group or groups. An allocation need not preserve the status quo in the fishery to qualify as "fair and equitable," if a restructuring of fishing privileges would maximize overall benefits. The Council should make an initial estimate of the relative benefits and hardships imposed by the allocation, and compare its consequences with those of alternative allocation schemes, including the status quo. Where relevant, judicial guidance and government policy concerning the rights of treaty Indians and aboriginal Americans must be considered in determining whether an allocation is fair and equitable.

(ii) *Promotion of conservation.* Numerous methods of allocating fishing privileges are considered "conservation and management measures" under section 303 of the Act. An allocation scheme may promote conservation by encouraging a rational, more easily managed use of the resource. Or it may promote conservation (in the sense of wise use) by optimizing the yield, in terms of size, value, market mix, price,

or economic or social benefit of the product.

(iii) *Avoidance of excessive shares.* An allocation scheme must be designed to deter any person or other entity from acquiring an excessive share of fishing privileges, and to avoid creating conditions fostering inordinate control, by buyers or sellers, that would not otherwise exist.

(iv) *Other factors.* In designing an allocation scheme, a Council should consider other factors relevant to the FMP's objectives. Examples are economic and social consequences of the scheme, food production, consumer interest, dependence on the fishery by present participants and coastal communities, efficiency of various types of gear used in the fishery, transferability of effort to and impact on other fisheries, opportunity for new participants to enter the fishery, and enhancement of opportunities for recreational fishing.

§ 602.15 National Standard 5—Efficiency.

(a) *Standard 5.* Conservation and management measures shall, where practicable, promote efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose.

(b) *Efficiency in the utilization of resources*—(1) *General.* The term "utilization" encompasses harvesting, processing, and marketing, since management decisions affect all three sectors of the industry. The goal of promoting efficient utilization of fishery resources may conflict with other legitimate social or biological objectives of fishery management. In encouraging efficient utilization of fishery resources, this standard highlights one way that a fishery can contribute to the Nation's benefit with the least cost to society: given a set of objectives for the fishery, an FMP should contain management measures that result in as efficient a fishery as is practicable or desirable.

(2) *Efficiency.* In theory, an efficient fishery would harvest the OY with the minimum use of economic inputs such as labor, capital, interest, and fuel. Efficiency in terms of aggregate costs then becomes a conservation objective, where "conservation" constitutes wise use of all resources involved in the fishery, not just fish stocks.

(i) In an FMP, management measures may be proposed that allocate fish among different groups of individuals or establish a system of property rights. Alternative measures examined in searching for an efficient outcome will result in different distributions of gains and burdens among identifiable user groups. An FMP should demonstrate that management measures aimed at efficiency do not simply redistribute gains and burdens without an increase in efficiency.

(ii) Management regimes that allow a fishery to operate at the lowest possible cost (e.g. fishing effort, administration, and enforcement) for a particular level of catch and initial stock size are considered efficient. Restrictive measures that unnecessarily raise any of those costs move the regime toward inefficiency. Unless the use of inefficient techniques or the creation of redundant fishing capacity contributes to the attainment of other social or biological objectives, an FMP may not contain management measures that impede the use of cost-effective techniques of harvesting, processing, or marketing, and should avoid creating strong incentives for excessive investment in private sector fishing capital and labor.

(c) *Limited access.* A "system for limiting access," which is an optional measure under section 303(b) of the Act, is a type of allocation of fishing privileges that may be used to promote economic efficiency or conservation. For example, limited access may be used to combat overfishing, overcrowding, or overcapitalization in a fishery to achieve OY. In an unutilized or underutilized fishery, it may be used to reduce the chance that these conditions will adversely affect the fishery in the future, or to provide adequate economic return to pioneers in a new fishery. In some cases, limited entry is a useful ingredient of a conservation scheme, because it facilitates application and enforcement of other management measures.

(1) *Definition.* Limited access (or limited entry) is a management technique that attempts to limit units of effort in a fishery, usually for the purpose of reducing economic waste, improving net economic return to the fishermen, or capturing economic rent for the benefit of the taxpayer or the consumer. Common forms of limited access are licensing of vessels, gear, or fishermen to reduce the number of units of effort, and dividing the total allowable catch into fishermen's quotas (a stock-certificate system). Two forms (i.e., Federal fees for licenses or permits in excess of administrative costs, and taxation) are not permitted under the Act.

(2) *Factors to consider.* The Act ties the use of limited access to the achievement of optimum yield. An FMP that proposes a limited access system must consider the factors listed in section 303(b)(6) of the Act and in § 602.14(c)(3) of these guidelines. In addition, it should consider the criteria for qualifying for a permit, the nature of the interest created, whether to make the permit transferable, and the Act's limitation on returning economic rent to the public under section 304(d)(1). The FMP should also discuss the costs of achieving an appropriate distribution of fishing privileges.

(d) *Analysis.* An FMP should discuss the extent to which overcapitalization, congestion, economic waste, and inefficient techniques in the fishery reduce the net benefits derived from the management unit and prevent the attainment and appropriate allocation of OY. It should also explain in terms of the FMP's objectives any restriction placed on the use of efficient techniques of harvesting, processing, or marketing. If during FMP development the Council considered imposing a limited-entry system, the FMP should analyze the Council's decision to recommend or reject limited access as a technique to achieve efficient utilization of the resources of the fishing industry.

(e) *Economic allocation.* This standard prohibits only those measures that distribute fishery resources among fishermen on the basis of economic factors alone, and that have economic allocation as their only purpose. Where conservation and management measures are recommended that would change the economic structure of the industry or the economic conditions under which the industry operates, the need for such measures must be justified in light of the biological, ecological, and social objectives of the FMP as well as the economic objectives.

§ 602.16 National Standard 6—Variations and Contingencies.

(a) *Standard 6.* Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.

(b) *Conservation and management.* Each fishery exhibits unique uncertainties. The phrase "conservation and management" implies the wise use of fishery resources through a management regime that includes some protection against these uncertainties. The particular regime chosen must be flexible enough to allow timely response to resource, industry, and other national and regional needs. Continual data acquisition and analysis will help the development of management measures to compensate for variations and to reduce the need for substantial buffers. Flexibility in the management regime and the regulatory process will aid in responding to contingencies.

(c) *Variations.* (1) In fishery management terms, variations arise from biological, social, and economic occurences, as well as from fishing practices. Biological uncertainties and lack of knowledge can hamper attempts to estimate stock size and strength, stock location in time and space, environmental/habitat changes, and ecological interactions. Economic uncertainty may involve changes in foreign or domestic market conditions, changes in operating costs, drifts toward overcapitalization, and economic perturbations caused by changed fishing patterns. Changes in fishing practices, such as the introduction of new gear, rapid increases or decreases in harvest effort, new fishing strategies, and the effects of new management techniques, may also create uncertainties. Social changes could involve increases or decreases in recreational fishing, or the movement of people into or out of fishing activities due to such factors as age or educational opportunities.

(2) Every effort should be made to develop FMPs that discuss and take into account these vicissitudes. To the extent practicable, FMPs should provide a suitable buffer in favor of conservation. Allowances for uncertainties should be factored into the various elements of an FMP. Examples are:

(i) *Reduce OY.* Lack of scientific knowledge about the condition of a stock(s) could be reason to reduce OY.

(ii) *Establish a reserve.* Creation of a reserve may compensate for uncertainties in estimating domestic harvest, stock conditions, or environmental factors.

(iii) *Adjust management techniques.* In the absence of adequate data to predict the effect of a new regime, and to avoid creating unwanted variations, a Council could guard against producing drastic changes in fishing patterns, allocations, or practices.

(iv) *Highlight habitat conditions.* FMPs may address the impact of pollution and the effects of wetland and estuarine degradation on the stocks of fish; identify causes of pollution and habitat degradation and the authorities having jurisdiction to regulate or influence such activities; propose recommendations that the Secretary will convey to those authorities to alleviate such problems; and state the views of the Council on unresolved or anticipated issues.

(d) *Contingencies.* Unpredictable events—such as unexpected resource surges or failures, fishing effort greater than anticipated, disruptive gear conflicts, climatic conditions, or environmental catastrophes—are best handled by establishing a flexible management regime that contains a range of management options through which it is possible to act quickly without amending the FMP or even its regulations.

(1) The FMP should describe the management options and their consequences in the necessary detail to guide the Secretary in responding to changed circumstances, so that the Council preserves its role as policy-setter for the fishery. The description enable the public to understand what may happen under the flexible regime, and to comment on the options.

(2) FMPs should include criteria for the selection of management measures, directions for their application, and mechanisms for timely adjustment of management measures comprising the regime. For example, an FMP could include criteria that allow the Secretary to open and close seasons, close fishing grounds, or make other adjustments in management measures.

(3) Amendment of a flexible FMP would be necessary when circumstances in the fishery change substantially, or when a Council adopts a different management philosophy and objectives.

§ 602.17 National Standard 7—Costs and Benefits.

(a) *Standard 7.* Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.

(b) *Necessity of Federal management—(1) General.* The principle that not every fishery needs regulation is implicit in this standard. The Act does not require Councils to prepare FMPs for each and every fishery—only for those where regulation would serve some useful purpose and where the present or future benefits of regulation would justify the costs. For example, the need to collect data about a fishery is not, by itself, adequate justification for preparation of an FMP, since there are less costly ways to gather the data (see § 602.13(d)(2)). In some cases, the FMP preparation process itself, even if it does not culminate in a document approved by the Secretary, can be useful in supplying a basis for management by one or more coastal States.

(2) *Criteria.* In deciding whether a fishery needs management through regulations implementing an FMP, the following general factors should be considered, among others:

(i) The importance of the fishery to the Nation and to the regional economy.

(ii) The condition of the stock or stocks of fish and whether an FMP can improve or maintain that condition.

(iii) The extent to which the fishery could be or is already adequately managed by States, by State/Federal programs, by Federal regulations pursuant to FMPs or international commissions, or by industry self-regulation, consistent with the policies and standards of the Act.

(iv) The need to resolve competing interests and conflicts among user groups and whether an FMP can further that resolution.

(v) The economic condition of a fishery and whether an FMP can produce more efficient utilization.

(vi) The needs of a developing fishery, and whether an FMP can foster orderly growth.

(vii) The costs associated with an FMP, balanced against the benefits (see paragraph (d) of this section as a guide).

(c) *Alternative management measures.* Management measures should not impose unnecessary burdens on the economy, on individuals, on private or public organizations, or on Federal, State, or local governments. Factors such as fuel costs, enforcement costs, or the burdens of collecting data may well suggest a preferred alternative.

(d) *Analysis.* The supporting analyses for FMPs should demonstrate that the benefits of fishery regulation are real and substantial relative to the added research, administrative, and enforcement costs, as well as costs to the industry of compliance. In determining the benefits and costs of management measures, each management strategy considered and its impacts on different user groups in the fishery should be evaluated. This requirement need not produce an elaborate, formalistic cost/benefit analysis. Rather, an evaluation of effects and costs, especially of differences among workable alternatives including the status quo, is adequate. If quantitative estimates are not possible, qualitative estimates will suffice.

(1) *Burdens.* Management measures should be designed to give fishermen the greatest possible freedom of action in conducting business and pursuing recreational opportunities that are consistent with ensuring wise use of the resources and reducing conflict in the fishery. The type and level of burden placed on user groups by the regulations need to be identified. Such an examination should include, for example: capital outlays; operating and maintenance costs; reporting costs; administrative, enforcement, and information costs; and prices to consumers. Management measures may shift costs from one level of government to another, from one part of the private sector to another, or from the government to the private sector.

Redistribution of costs through regulations is likely to generate controversy. A discussion of these and any other burdens placed on the public through FMP regulations should be a part of the FMP's supporting analyses.

(2) *Gains.* The relative distribution of gains may change as a result of instituting different sets of alternatives, as may the specific type of gain. The analysis of benefits should focus on the specific gains produced by each alternative set of management measures, including the status quo. The benefits to society that result from the alternative management measures should be identified, and the level of gain assessed.

Appendix A to Subpart B—Explanatory Material

Purpose of Appendix

The purpose of the Appendix is to preserve, as codified reference, useful explanatory material and supplementary policy rationale originally published as preamble to the various editions of the proposed and final 50 CFR Part 602 rules.

Overview of Approach

The guidelines are designed to allow for innovative policy evolution in response to new biological, social, economic, or ecological circumstances, and set out the benchmarks of current fishery management policy under the Act. NOAA believes the guidelines should supply the Councils, as fishery management planners, a means to assess their work in developing and documenting their decisions. To that end, certain sections of the guidelines specifically address requirements and options for contents of an FMP, supplementing and drawing into relevant focus provisions of Phase II, *Operational Guidelines for the Fishery Management Process*, February 1988 revision. These sections are usually indicated by the paragraph heading "analysis," within which is given more detailed guidance as to the kind of discussion and examination that an FMP should contain to demonstrate consistency with the standard in question. Words within these sections were carefully chosen to convey levels of effort and information commensurate with need (*e.g.*, "consider," "take into account," "explain," "discuss," "examine," "analyze," "identify.")

Fishery management decisions affect the users of fish resources, the government, and the individual taxpayer/consumer. Members of user groups, those responsible for implementing a fishery management regime, and the general citizenry need to know the reasons for decisions that affect them. Thus, it is important that certain issues (particularly those that are controversial) undergo enough examination and discussion to illuminate the options, demonstrate the rationales, and justify the final choice of management regime. This implicit democratic principle of accountability in government underlies and reinforces the Secretary's statutory responsibility to make informed judgments regarding an FMP's consistency with the national standards. The principle is reflected in the philosophies of the National Environmental Policy Act (NEPA), the Regulatory Flexibility Act (RFA), the Paperwork Reduction Act (PRA), and Executive Order (E.O.) 12291—all of which seek accountability in regulatory action.

The guidelines contain a style guide, which explains the use of specific words to distinguish the advisory, explanatory, or obligatory nature of the guideline language, and presents other words within the precise context of the guidelines. The guidelines seek as much precision as possible in the use of the words "should" and "must". "Must" is used to denote an obligation to act and is used primarily when referring to requirements of the Act, the logical extension thereof, or other applicable law. "Should" is used to indicate that an action or consideration is strongly recommended to fulfill the Secretary's interpretation of the Act, and is a factor that reviewers will look for in evaluating an FMP.

The guidelines seek to provide options rather than establish requirements. Lists are not intended to be exclusive; they provide examples or illustrations of the kind of information, discussion, or examination/analysis useful in demonstrating consistency with the standard in question. The guidelines also seek to avoid universal application of a specific provision, except as required by law, so that the maximum accommodation to regional or individual fishery characteristics can be achieved within the standards.

The guidelines make clear that FMPs in substantial compliance with the guidelines, the Act, and other applicable law must be approved. The guidelines are meant as a protection for everyone in the FMP system. Their acceptance and use are a matter of practical utility for the Councils and of public commitment of the agency to consistent application of the policies stated. As an aggregation of policies developed through creative Council responses to regional fishery management problems, they are a way of sharing the empirical knowledge gained over the life of the Act. In summary, the guidelines are intended as an aid to decisionmaking, with responsible conservation and management of a valued national resource as the goal.

Overview of the 1989 Revision

Changes made in the guidelines since they were issued in 1983 address national standards 1 and 2 only, and were motivated largely by the need, articulated by the 1986 Fishery Management Study and others, for a conservation standard. Consequently, changes in the guidelines emphasize the resource, not its allocation, and focus on overfishing, not on optimum yield (OY). Importantly, the guidelines do not change the relationship between the two as implied in the Act: While overfishing necessarily violates the Act's requirement to achieve (OY), exceeding OY does not necessarily violate the Act's prohibition of overfishing. If a stock is in good condition, the specification of OY may serve various goals besides prevention of overfishing. Exceeding the OY may interfere with achievement of those goals but not affect the reproductive potential of the stock. On the other hand, if OY is the amount of fish that can safely be removed from the stock, exceeding OY may well constitute overfishing.

The revised guidelines for standard 1 set forth a comprehensive overfishing concept within which each Council must establish 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 availability to recover in a reasonable period of time is unacceptable, and that fishing on a stock at a level that severely compromises that stock's future productivity is counter to the goals of the Magnuson Act. Councils are provided with the flexibility needed to develop a definition of overfishing appropriate to individual stocks or species, as long as it is defined in a way that allows the Councils and the Secretary to evaluate the condition of the stock relative to the definition. General criteria are set forth as a basis for Secretarial review of the definition; these criteria address the overfishing definition specifically and do not change the Secretary's obligation to review FMPs/amendments for consistency with all the national standards, the Act, and other applicable law.

The revised guidelines for standard 2 describe a Stock Assessment and Fishery Evaluation (SAFE) document or set of documents prepared or aggregated periodically, whereby Councils can obtain an objective overview of the status of stocks and fisheries under management. The SAFE document would ideally include all the types of data necessary for the determination of OY, as well as provide the basis for a Council's treatment of the overfishing/OY relationship. While the Secretary has the responsibility for assuring that the SAFE report is produced, it is not intended to be exclusively authored by NOAA. The report can be produced by any combination of talent from academic, government, or other sources. The report should be reviewed annually, but is not required to be revised annually except as there have been new developments or significant changes in a fishery. The itemized examples of data listed in this Appendix are not mandatory, but—as appropriate to the fishery, taking into consideration the need to establish priorities within budget constraints—the best available data must be addressed. Several Councils currently produce such fishery reviews, which generally provide the kinds of information suggested in this Appendix under Standard 2.

The SAFE report does not necessarily call for new information or new procedures; the intent is to provide, in one reference, an aggregation or a summary of the best biological, social, economic, and ecological 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. Such a report can provide a useful tracking tool for assessing the relative achievement of FMP objectives by

establishing a time-series data base indicating the relative health of stocks and the interests dependent on them.

Standard 1

Overfishing

Overfishing is a relative term; it cannot be defined in isolation from its biological, social, economic, or ecological consequences; nor from its relationship to given management objectives. The prevention of overfishing has as its general goal the protection of a stock's productive capacity.

Significant downward trends in spawning stock size or average annual recruitment to the fishery may signal that overfishing is occurring, although such trends can also be symptomatic of other phenomena, for example the development of a new fishery. Ascertaining whether these trends signal overfishing is a judgment based on scientific stock assessment, which in turn may be based on data obtained from harvesters and processors (through logbooks, catch samples, interviews, weigh-out slips, etc.), resource surveys, or other scientific research.

NOAA also recognizes that a decline in stock size or abundance may occur independent of fishing pressure and that adverse changes in essential habitat may increase the risk that fishing effort will contribute to a stock collapse. Regardless of the cause of a decline, however, the Act limits a Council's authority in addressing the situation. The only direct control available under the Act is to adjust fishing mortality, which may be accomplished in several ways (*e.g.*, by establishing or adjusting time/area closures or limits on catch, mesh size, vessel days, or the number of vessels entering the fishery). If man-made environmental changes are contributing to the downward trends, in addition to controlling effort Councils should recommend restoration of habitat and other ameliorative programs, to the extent possible, and consider whether to take action under section 302(i) of the Act.

Different fishing patterns can produce a variety of effects on local and areawide abundance, availability, size, and age composition of a stock. Some of these fishing patterns have been called "growth," "localized," or "pulse" overfishing; however, these patterns are not necessarily overfishing under national standard 1. 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.

The term "growth overfishing" often refers to the practice of taking too many fish from a cohort (year class) before the cohort has attained its maximum potential biomass. The term can also refer to harvesting at a fishing mortality rate in excess of that which maximizes the expected yield from a cohort given a particular age or size of recruitment. "Growth overfishing" can be practiced deliberately, for example to capitalize on demand for a smaller product, or inadvertently, for example by using nonselective gear. "Growth overfishing" may be discouraged or disallowed by regulating fishing gear or imposing time/area closures, to force fishing on larger or more marketable fish.

"Localized overfishing" occurs when a stock is depleted within a confined portion of its range. For example, this fishing pattern can occur in reef fisheries when concentrated fishing pressure reduces the population of a species or species complex inhabiting a particular reef or reef complex. An important characteristic of this fishing pattern is that it is often temporary; if fishing effort is reduced sufficiently, the remainder of the stock can often repopulate the depleted portion, reversing the condition.

"Pulse overfishing" can be tolerated under certain conditions. For example, it can sometimes be desirable for economic and social reasons to take a large amount of fish in a short time, and then to let the stock recover. In general, the key point in terms of national standard 1 is not so much the pattern of fishing (*e.g.*, pulse vs. sustained) as the rate of fishing mortality and its effect on the long-term capacity of the stock to produce MSY.

As management regimes become more comprehensive, the interrelationships of fishing pressures on target and nontarget (as well as major and minor) species will have to be addressed more directly. In determining allowable fishing levels, Councils should consider all sources of mortality on a stock, including non-targeted fishing, discards, and illegal catch. Because all removals from the stock, whether landed or unlanded, will affect spawning stock biomass levels now or in the near future, Councils should attempt to obtain estimates of all sources of mortality and consider these estimates in adjusting directed fishing levels. While the general expectation is for total fishing mortality on a stock to be managed such that overfishing does not occur, NOAA believes that rational management of multispecies fisheries includes acknowledgement of the fact that overharvesting minor components of these fisheries may be allowable in certain cases. The guidelines emphasize that such cases are characterized by two necessary conditions: (1) That analysis demonstrates positive net benefits to the Nation will result from overfishing the minor component(s), and (2) that such overharvest will not cause any stock to require protection under the Endangered Species Act.

NOAA believes that the overfishing sections of the guidelines are responsive to the findings of the Act and to subsequent studies urging a conservation standard—particularly when read in conjunction with the analysis provisions throughout the guidelines, and with the standard 6 guideline provisions for buffers, reserves, and framework FMP flexibility.

Maximum Sustainable Yield

Much of the past controversy concerning MSY has related to its adequacy as a management goal. As used in the Act, however, calculation of MSY is a only a baseline step in the overall process of determining OY. Recognizing that MSY must represent the underlying biological rationale for determination of OY in a wide variety of fisheries, the guidelines set forth a flexible framework for its calculation. Recognition of the need for flexibility in calculating MSY has come as a result of FMP review experience and Council innovation in adapting this concept to the characteristics of different fisheries.

It is clear that every attempt should be made to satisfy the Act's requirement for specification of MSY. However, there may be cases where scarcity of data or tentativeness of scientific understanding renders MSY specification impossible, or where biological resiliency or high fecundity of some stocks or other fishery characteristic may allow OY to become a descriptive statement only—making a numerical calculation of MSY unnecessary. In such cases, NOAA believes that Congressional intent is served if OY derives from the best biological information available, *e.g.*, the proportional abundance of associated species. Descriptive OYs should be convertible to annual numerical estimates for the purpose of deriving the total allowable level of foreign fishing (TALFF).

As a subsequent step in the process of determining OY, MSY may be adjusted (deviated from) for economic, social, or ecological reasons. One type of adjustment is illustrated by the concept of biologically acceptable catch (ABC), used by some Councils. ABC is an annually determined number that may be set lower or higher than MSY for a number of reasons, *e.g.*, to take advantage of abnormally high recruitment, to allow rebuilding of stocks, or to be conservative when there are inadequate data on the status of the stocks.

Optimum Yield

NOAA believes it important to keep the distinction clear between the two separate parts of standard 1: To prevent overfishing, and to achieve OY. The guidelines are written such that overfishing is an intrinsic limitation on OY; it is built into the OY determination, yet maintains a separate identity as a constraint. For example, exceeding a stock's OY by a small amount typically does not constitute overfishing when the stock is healthy. On the other hand, exceeding OY can coincidentally constitute overfishing when the margins of tolerance are low. Buffers to protect against overfishing because of uncertainty in estimating stock size or domestic harvest may be established in the form of reserves or a reduced OY.

Regardless of whether sustained harvesting at a level above OY constitutes overfishing, such a harvest pattern violates the Act's requirement to achieve OY on a continuing basis. In other words, national standard 1 is violated whenever the level of harvest is consistently and significantly different from OY, irrespective of whether that harvest level is above or below OY. While recognizing that OY might not be achieved every year in practice, NOAA believes that Councils must make every reasonable attempt to see that it is.

The guidelines also state that in the case of a mixed species fishery, the OY for incidental species may be a function of the directed catch, or absorbed into an OY for related species.

NOAA believes that achievement of OY includes giving foreign fishing vessels

reasonable opportunity to harvest the portion of the OY (TALFF) that would not otherwise be harvested by vessels of the United States. However, nothing precludes Councils from setting OY equal to DAH (effectively eliminating TALFF), if circumstances warranting such action are documented. For example, international economic concerns may influence the size of TALFF through their consideration as modifying factors in the determination of OY.

Standard 2

General

Application of this standard affects the operation of all the other standards. The quantity and quality of scientific information influence the establishment of MSY, OY, and management unit composition; they underlie allocative determinations, judgments of efficiency, adjustments for variations and contingencies, and evaluations of costs and benefits. The guidelines address the questions of timeliness, opposing bodies of opinion, and practical utility of the information specified, and emphasize the continuing need for information for monitoring and in-season adjustment decisions under a flexible management regime. A voluntary system of data collection is permissible, but requires a justification under the Paperwork Reduction Act, and is not covered under the Act's confidentiality provision. It is acceptable to collect data within State boundaries when needed for proper implementation of an FMP, but duplication of effort should be avoided. Successful data collection depends on the protection of confidential data, the public trust in that protection, and the public perception of the valid uses of those data. The validity of the entire process may hinge on the cooperative attitudes of constituents, the research community, and the relevant governmental institutions.

Stock Assessment and Fishery Evaluation (SAFE) Report

The SAFE Report provides Councils with a summary of the biological condition of species in the FMU, and the social and economic condition of recreational and commercial fishing interests and fish processing industries. The SAFE report 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.

(1) Each SAFE report should contain information on which to base harvest specifications, such as:

(a) Estimates of total biomass and/or spawning biomass for each stock in the FMU;

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

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

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

(e) If a stock is depleted, estimated time necessary to allow the stock to rebuild to the MSY-producing level, threshold level, or other specified level under various harvest levels and prevailing environmental conditions; and

(f) 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.

(2) Each SAFE report should contain information on which to assess the economic and social condition of persons and businesses that rely on recreational and commercial use of fish resources, including fish processing industries, such as:

(a) Estimate of the amount of fish harvested from each stock in the FMU, by gear type and area, in the most recent 3 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;

(b) The approximate exvessel value of commercially harvested fish described in item (a) of this paragraph;

(c) Amounts and estimated value of each type of processed product derived from the harvested fish described in item (1) of this paragraph;

(d) 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;

(e) Estimates of the number of commercial fishermen employed in each fishery for (or in) the FMU;

(f) The numbers of processing plants, floating and shore based, individual and by product type, involved in processing the harvested fish described in item (1) of this paragraph;

(g) Estimates of the number of individuals employed in the processing plants described in item (f) of this paragraph;

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

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

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

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

(3) 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, such as:

(a) Enforcement actions taken and penalties assessed and collected over the most recent 3 years under an implemented FMP;

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

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

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

Standard 3

Standard 3's principle of comprehensive management works well with standard 7's principle of avoiding duplication. The emphasis in the revision is on the scope, composition, and unity of the management unit, and on coordination and cooperation rather than on potential jurisdictional tension. NOAA believes that range-wide planning should encourage active State participation in the planning process, and that such planning will provide clear direction to the States as to what is needed to implement the proposed management regime effectively. This is consistent with Council practice; the result should be greater compatibility between Federal and State management measures.

Because the potential for incompatibility does exist, however, the guidelines require an FMP to discuss the interrelationship between State management activities and the proposed Federal regime. Federal regulations supersede any conflicting State regulations of EEZ fishing (F/V American Eagle v. Alaska, No. 2227 (Alaska, Nov. 21, 1980)). State landing laws and other forms of indirect regulation of EEZ fishing may be affected by implementing an FMP. The required analysis focuses attention on these impacts and on the effect of inconsistent State action on attaining the objectives of the FMP. This latter discussion will assist in determining Secretarial responsibilities under section 306(b) of the Act.

Standard 3 calls for management of a "stock" throughout its range. NOAA feels that the use of the words "stock," "fishery," and "management unit" is significant, and has endeavored to use the appropriate term in the guidelines. A stock may be larger than the fishery, as is the case when only a portion of the stock is actively fished. A fishery may be larger than a stock, when more than one stock is fished together. The management unit may ignore a portion of fishery or stock when it includes a transboundary fishery or when a minor portion of the unit is fished within the area of authority of another Council. Examples are given of the perspectives around which a management unit may be organized.

Standard 4

To assist Councils in making what are usually the most controversial decisions within an FMP, NOAA has tried to confront the human issues surrounding fishery management directly, consistent with its concern for the economic and social consequences of regulation.

The guidelines address the "discrimination among residents of different States" issue as an extension of the Federal privilege and immunities" clause of the U.S. Constitution, which means that Councils may not rely on, nor incorporate within an FMP, a State law that discriminates against residents of a different State. Discrimination is a distinct concept from equity.

Fishery management is essentially a series of allocations among present users, between present and future users, between public and private interests. The guidelines define "allocation" for purposes of the standard as a direct and deliberate distribution of the opportunity to participate in a fishery among identifiable, discrete groups of fishermen.

Because only measures that meet the definition will be judged against the standard, this is a critical and sensitive differentiation.

Many management measures may have an *incidental* effect on the fishing privileges enjoyed by different groups of U.S. fishermen. Any quota has a distributive effect on present and future users through its impact on stock maintenance or rebuilding. Area closures may cause practical difficulties for smaller vessels or those located far from open areas. Seasonal quotas create difficulties for those whose economics of operation do not permit a long period of inactivity.

Direct allocations, by contrast, have been made by the several Councils in a variety of FMPs in the past: Quotas by classes of vessels (Atlantic groundfish), quotas for commercial and recreational fishermen (Atlantic mackerel), different fishing seasons for recreational and commercial fishermen (salmon), assignment of ocean areas to different gears (stone crab), and limiting permits to present users (surf clam). These direct allocations were approved under standard 4 because the Councils complied with the three statutory criteria of the standard in constructing their allocation schemes.

The guideline's definition is an attempted middle ground between all measures affecting fishing practices and measures designated as allocations in an FMP. The distribution must be direct and deliberate, but a Council could not disclaim an intent to allocate through a measure that had obvious and inevitable allocative effects.

NOAA believes that the required analysis of allocations and alternative schemes considered—including the status quo—will help to focus attention on the existing distribution of privileges and the alteration of that distribution which Federal management will impose. Each FMP should contain the Council's judgment on fairness and equity, conservation promotion, and possible monopolistic or oligopolistic effects of the proposed allocations.

The guidelines link "fairness" with FMP objectives and OY and acknowledge that fishing rights of treaty Indians and aboriginal Americans should be factored into Council judgments. Rational use of the resource is suggested as one way an allocation scheme may promote conservation. A more visible conservation purpose is illustrated by the moratorium on entry of new vessels into the surf clam fishery, initiated to mitigate a resource crisis in a stock.

Standard 5

NOAA believes that, for purposes of standard 5, efficiency can be defined as the ability to produce a desired effect or product (or achieve an objective) with a minimum of effort, costs, or misuse of valuable biological and economic resources. In other words, Councils should choose management measures that achieve the FMP's objectives with minimum cost and burdens on society. NOAA believes that particular care should be taken when considering management of common property resources—where intensive individual market actions risk the "tragedy of the commons," a concept that comprises damage not only to the individual fisherman, but to the very resource on which he depends. Where there are no property rights, the role of government takes on the dimension of stewardship. NOAA also believes that managing at least cost to society and managing at least cost to the fisherman are not mutually exclusive. NOAA reads standards 5 and 7 together; to minimize costs of regulating also means to minimize costs to the industry of compliance.

The guidelines also recognize the difficulty inherent in reconciling particular economic and social needs of industry participants and consumers with this goal of efficiency. For example, maximizing employment opportunities by allowing continued overcapitalization instead of reducing effort might be considered inefficient in terms of an economic goal, but not necessarily in terms of a social goal. Or, when it is necessary to preserve a subsistence way of life or enjoyment of recreational fishing, application of the efficiency standard may not be appropriate. Councils thus may have to choose between—or rank—competing objectives.

NOAA believes that an FMP should not restrict the use of productive and cost-effective techniques of harvesting, processing or marketing, unless such restriction is necessary to achieve the conservation or social objectives of the FMP. For example, the Pacific salmon FMP provides for use of a barbless hook to decrease mortality of sublegal coho and chinook. The high seas salmon FMP requires heads on" landing for fin-clipped coho and chinook to insure recovery of coded wire tags used to establish a needed distribution data base. In both cases, reduction in efficiency was outweighed by the conservation benefit.

Administrative efficiency can be a factor in choosing between management regime alternatives, as well. The Gulf of Mexico shrimp FMP's cooperative Texas closure, for example, increased the effectiveness and efficiency of enforcement.

NOAA chose to address the questions surrounding "limited access" in the context of standard 5 rather than in standard 4, even though limited access, by its nature, is an allocative measure. In fact, the guidelines caution that any limited access system must be consistent with section 303(b)(6) of the Act and the standard 4 guidelines. NOAA believes that placement within standard 5 puts the emphasis more appropriately on concepts of economic efficiency in achieving OY rather than on the contentious issues of right of entry, or limit on effort, per se. The placing of limited access within the standard 5 context does not imply, however, that efficiency is always attained by limited access, nor that limited access is the most desirable method of attaining efficiency, nor that efficiency is the only purpose for limited access, nor that limited entry has always resulted in the benefits listed in the guidelines.

Standard 6

NOAA recognizes that each fishery exhibits unique uncertainties, and that the unpredictable nature of the fishery resource caused by vulnerability to changing conditions and unforeseeable events makes long-term planning difficult. Long-term objectives are more easily attainable in the more stable fisheries. The guidelines clarify that it is possible to compensate for variations by establishing buffers; protection against contingencies is urged through use of flexibility in the regulatory process.

Standard 7

The principles of standard 7 coincide with many earnest and recently intense efforts of NOAA and the Councils to streamline the FMP process. As more FMPs have come on line, the costs of enforcement and of collecting data for monitoring, while reduced per FMP, have increased in total. The rising costs of fishing, due in part to dependence on petroleum-based products, has intensified the need to consider the impact of potentially burdensome regulations. Thus, it has become necessary to be more precise in evaluating the costs to industry and to government, to support comprehensive management, and to work toward a flexible regulatory structure.

NOAA believes that the requirements of E.O. 12291 and other regulatory reform legislation quite appropriately focus attention on the threshold question of the actual need for management through regulation. Even when a Council believes there is an advantage to managing a fishery, growing public concern over excessive Federal regulation of private activities and over the need to reduce the cost of government emphasizes the responsibility to ensure that FMPs are developed only for those fisheries where the need for Federal regulation can be clearly demonstrated. For these reasons, the guidelines propose criteria to assist in making these threshold decisions.

NOAA recognizes that the wide diversity of fisheries and of management objectives increases the difficulties of devising a quantitative cost/benefit analysis for fishery management measures. However, under the guidelines, the types of analyses suggested under standards 4 and 5 would be the first steps in evaluating relative distribution of gains and burdens produced by each alternative set of management measures. While weight of intangibles such as recreational enjoyment, habitat protection, or social dislocation often cannot be expressed in dollar terms, NOAA believes they should be considered and described as explicitly as possible.

[FR Doc. 89-17017 Filed 7-21-89; 8:45 am]

Editorial Note: This reprint incorporates corrections published in the **Federal Register** of Monday, July 31, 1989.

BILLING CODE 3510-22-M