



2-1 of the Commandant Instruction. An environmental analysis checklist supporting this determination and a Categorical Exclusion Determination are available in the docket where indicated under ADDRESSES.

**List of Subjects in 33 CFR Part 165**

Harbors, Marine safety, Navigation (water), Reporting and recordkeeping requirements, Security measures, Waterways.

For the reasons discussed in the preamble, the Coast Guard amends 33 CFR Part 165 as follows:

**PART 165—REGULATED NAVIGATION AREAS AND LIMITED ACCESS AREAS**

■ 1. The authority citation for part 165 continues to read as follows:

**Authority:** 33 U.S.C. 1226, 1231; 46 U.S.C. Chapter 701, 3306, 3703; 50 U.S.C. 191, 195; 33 CFR 1.05-1, 6.04-1, 6.04-6, and 160.5; Public Law 107-295, 116 Stat. 2064; Department of Homeland Security Delegation No. 0170.1.

■ 2. Add § 165.T13-253 to read as follows:

**§ 165.T13-253 Maritime Heritage Festival, St. Helens, Oregon.**

(a) *Safety Zone.* The following areas are designated safety zone:

(1) *Location.* All waters of the Columbia River at St. Helens, OR encompassing a 500 yard radius in all directions from the discharge site.

(2) *Enforcement period.* This safety zone is in effect from Saturday July 27, 2013, from 9:45 p.m. to 10 p.m.

(b) *Regulations.* In accordance with the general regulations in 33 CFR part 165, subpart C, no person may enter or remain in the safety zone created in this section or bring, cause to be brought, or allow to remain in the safety zone created in this section any vehicle, vessel, or object unless authorized by the Captain of the Port or his designated representative. The Captain of the Port may be assisted by other Federal, State, or local agencies with the enforcement of the safety zone.

Dated: July 2, 2013.

**B.C. Jones,**  
Captain, U.S. Coast Guard, Captain of the Port, Sector Columbia River.

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**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**50 CFR Part 600**

[Docket No. 0808041047-3587-03]

**RIN 0648-AW62**

**Magnuson-Stevens Act Provisions; National Standard 2—Scientific Information**

**AGENCY:** National Marine Fisheries Service (NMFS); National Oceanic and Atmospheric Administration (NOAA); Commerce.

**ACTION:** Final rule.

**SUMMARY:** This final action amends the guidelines for National Standard 2 (NS2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) regarding scientific information. Consistent with the President's memo on Scientific Integrity (March 9, 2009) and NOAA Administrative Order 202-735D, the revised NS2 guidelines are intended to ensure the highest level of integrity and strengthen public confidence in the quality, validity and reliability of scientific information disseminated by the National Marine Fisheries Service (NMFS) in support of fishery management actions. This action provides guidance on what constitutes best scientific information available (BSIA) for the effective conservation and management of fisheries managed under Federal fishery management plans (FMPs), and adds new language to the NS2 guidelines regarding the advisory role of the Scientific and Statistical Committees (SSCs) of the Regional Fishery Management Councils (Councils) and the relationship of SSCs to the peer review process. The revised NS2 guidelines also clarify the content and purpose of the Stock Assessment and Fishery Evaluation (SAFE) Report and related documents. This action makes modest adjustments to current operating practices; it is intended to ensure that scientific information, including its collection and analysis, as appropriate, is transparent to the public, and is used appropriately by SSCs, Councils, and NMFS in the conservation and management of marine fisheries.

**DATES:** Effective July 19, 2013.

**ADDRESSES:** Copies of supporting documents prepared for this final rule, such as the proposed rule and public comments that were received, can be found at the Federal e-Rulemaking

portal: <http://www.regulations.gov> by searching for RIN 0648-AW62.

**FOR FURTHER INFORMATION CONTACT:** William Michaels by phone 301-427-8155, by FAX at 301-713-1875, or by email: [William.Michaels@noaa.gov](mailto:William.Michaels@noaa.gov).

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**I. Overview of Revisions to the NS2 Guidelines**

Section 301(a)(2) of the MSA specifies that fishery conservation and management measures shall be based upon the best scientific information available. 16 U.S.C. 1851(a)(2). Section 301(b) of the MSA states that: "the Secretary (of Commerce) shall establish advisory guidelines (which shall not have the force and effect of law), based on national standards, to assist in the development of fishery management plans." *Id.* 16 U.S.C. 1851(b). The existing national standard guidelines appear at 50 CFR 600.305 through 600.355. In the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2007, Congress added provisions to improve the use of science in decision-making, including a stronger role for Councils' SSCs in the review of scientific information and providing fishing level recommendations to their Councils, and authorizing the Secretary and Councils to establish a peer review process for scientific information used to advise Councils about conservation and management of fisheries. These revised NS2 guidelines address the above changes in the MSA. The guidelines include guidance on what constitutes BSIA for fishery conservation and management measures, provide standards for scientific peer review, clarify the role of the SSC in the review of scientific information for its Council, expand and clarify the contents of SAFE reports, and emphasize the importance

of the availability and transparency of SAFE reports used in Council decision making.

We published an advanced notice of proposed rulemaking (ANPR) in the *Federal Register* on September 18, 2008 (73 FR 54132), announcing the agency's intent to revise the NS2 guidelines, and received public comments from 24 organizations providing recommendations. The proposed guideline revisions published in the *Federal Register* on December 11, 2009 (74 FR 65724), and were open for public comment for three months, through March 11, 2010. We received comments from 25 organizations and 118 identical email submissions. In general, the public comments were supportive of the need to revise the NS2 guidelines and provided informative recommendations and some editorial clarifications. We address changes made in the final NS2 guidelines in the next section (Section II), and summarize comments received on the proposed guidelines and respond to those comments in Section IV. Response to Comments.

## II. Synopsis of Changes Made in the Final Action

This final action does not include substantive changes from the proposed guideline revisions. In response to public comments, changes were made to clarify the guidelines and emphasize the importance of public transparency in peer review of scientific information, as recommended by public comments. Language was added to clarify the following: Scientific information includes both established and emerging science; peer reviewers should not make formal fishing level recommendations, because this is the purview of the SSC; no individual can be appointed to a review panel if that individual has a conflict of interest that is relevant to the functions to be performed; peer reviews that require a greater degree of independence should use rotation of reviewers, recognizing that repeated service by the same reviewer may be unavoidable when there is a limited availability of expertise; SAFE reports should contain an explanation of information gaps and highlight needs for future scientific work; and for stocks managed cooperatively by Federal and State governments, the scientific information used for FMP development should include harvest information from both state and Federal waters. See Section V of this preamble for a detailed description of the changes made to the text of the proposed action.

## III. Overview of the Major Aspects of the Final Action

### A. Best Scientific Information Available (BSIA)

In 2004, the National Research Council (NRC) of the National Academies examined the application of the BSIA standard in the development of fishery conservation and management measures. The NRC recommended approaches to more uniformly apply the BSIA standards for fishery management actions. The NRC recommendations are available in the NRC (2004) publication entitled "Improving the Use of the 'Best Scientific Information Available' Standard in Fisheries Management" (2004, <http://books.nap.edu/openbook.php>).

The revised NS2 guidelines adopt, to the extent possible, the 2004 NRC recommendations regarding the production and use of scientific information for fishery management actions. The public comments provided a nearly unanimous recommendation that the NS2 guidelines should be revised to incorporate the NRC recommendations, and that an overly prescriptive definition of BSIA should be avoided due to the dynamic nature of science. Therefore, as recommended by the NRC, the NS2 guideline revisions are based on the following widely accepted criteria for evaluating BSIA: Relevance, inclusiveness, objectivity, transparency, timeliness, verification, validation, and peer review of fishery management information as appropriate. The revised NS2 guidelines do not prescribe a static definition of BSIA because science is a dynamic process involving continuous improvements.

The availability and quality of scientific information to inform fisheries management varies. Ecosystems and human societies are complex, interacting, dynamic systems that are impacted by multiple factors, including those within the scope of fisheries management. Some fisheries are well studied and have much information from long-term annual research surveys and comprehensive biological, social, and economic fisheries data collection programs. Other fisheries do not have the same breadth of information available. In light of this variability, the NS2 guideline revisions elevate the importance of evaluating the uncertainty and associated risk of the scientific information to inform fishery management decisions. The revised guidelines also provide that mandatory management decisions should not be delayed due to limitations in the scientific information or the promise of future data collection or analysis.

The NS2 guidelines provide guidance that is fundamental for the reliability and integrity of scientific information to be used by the Secretary and Councils to effectively manage and conserve our nation's living marine resources.

### B. Peer Review Processes

Pursuant to its authority under the Information Quality Act (44 U.S.C. 3516), the Office of Management and Budget (OMB) issued a Final Information Quality Bulletin for Peer Review (70 FR 2664, January 14, 2005) that establishes minimum peer review requirements for "influential scientific information" disseminated by Federal agencies. Section 302(g)(1)(E) of the MSA provides that: "The Secretary and each Council may establish a peer review process for that Council for scientific information used to advise the Council about the conservation and management of the fishery." 16 U.S.C. 1852(g)(1)(E). If the Secretary and a Council establish such a process, it will be deemed to satisfy the requirements of the Information Quality Act, including the OMB Peer Review Bulletin guidelines. The revised NS2 guidelines provide guidance and widely-accepted national quality standards that should be followed to establish a peer review process per MSA section 302(g)(1)(E). They also provide flexibility to maintain existing peer review processes established by the Secretary and Councils, and clarify the role of the Councils' SSCs in the scientific review process.

MSA section 302(g)(1)(E) peer review processes must be carefully designed to maximize the likelihood of an outcome that is objective, and provide useful information relative to the intended scope of work. The revised NS2 guidelines adopt many of the OMB peer review standards, including balance in expertise, knowledge, and bias; lack of conflicts of interest; independence from the work being reviewed; and transparency of the peer review process. A peer review may take many forms, including individual letter or written review or panel reviews. Duplication of previously conducted peer review should be avoided. The amount of time and resources spent on any particular review and the degree of independence may depend on the novelty, controversy, and complexity of the scientific information being reviewed. Peer reviewers who are federal employees must comply with all applicable federal ethics requirements (available at: <http://www.oge.gov/>). Potential reviewers who are not Federal employees must be screened for conflicts of interest in accordance with

the procedures set forth in the NOAA Policy on Conflicts of Interest for Peer Review subject to OMB's Peer Review Bulletin (available at: [http://www.cio.noaa.gov/service\\_programs/NOAA\\_PRB\\_COI\\_Policy\\_110606.html](http://www.cio.noaa.gov/service_programs/NOAA_PRB_COI_Policy_110606.html)). The nature and scope of each peer review should be developed and defined prior to the selection of reviewers, to ensure that reviewers with the appropriate expertise and skills are selected.

Peer review processes established by the Secretary and a Council for that Council should not be duplicative and should focus on reviewing information that has not already undergone rigorous peer review. When the Secretary and a Council develop a peer review process per MSA section 302(g)(1)(E), the revised NS2 guidelines provide that they must publish a notice and brief description of the process in the Federal Register, make a complete, detailed description of the process publicly available on the Council's Web site, and update it as necessary.

The revised NS2 guidelines are not intended to replace or result in the duplication of effective peer review processes that have already been established by NMFS and the Councils, such as the Stock Assessment Workshop/Stock Assessment Review Committee (SAW/SARC), Southeast Data Assessment Review (SEDAR), Stock Assessment Review (STAR), and Western Pacific Stock Assessment Review (WPSAR). Section 302(g)(1)(E) of the MSA provides that the peer review process established by the Secretary and a Council may include existing committees or panels. The aforementioned existing peer review processes (SAW/SARC, SEDAR, STAR and WPSAR) may qualify as MSA section 302(g)(1)(E) review processes, if the determination is made by the Secretary in conjunction with the relevant Councils. If such a determination is made, the Secretary will announce the decision in the Federal Register.

The impact of this action on current Council peer review practices should be minimal because the peer review standards are consistent with OMB's policy and presently incorporated in the existing peer review processes established by the Secretary and Councils. However, it may be necessary to refine those existing review processes in accordance with these revised NS2 guidelines.

### C. The Role of the SSC in the Review of Scientific Information

The NS2 guidelines address several roles of the SSC and/or SSC members:

The SSC as scientific advisor to its Council; the SSC as a peer review panel; and SSC members' participation on other peer review panels. With regard to the advisory role, the NS2 guidelines provide that the SSCs are the scientific advisory bodies to the Councils.

Section 302(g)(1)(A) of the MSA mandates that: "Each Council shall establish, maintain, and appoint the members of a scientific and statistical committee to assist it in the development, collection, evaluation, and peer review of such statistical, biological, economic, social, and other scientific information as is relevant to such Council's development and amendment of any fishery management plan." 16 U.S.C. 1852(g)(1)(A). As stated in MSA section 302(g)(1)(B), each SSC: "Shall provide its Council ongoing scientific advice for fishery management decisions, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield, and achieving rebuilding targets, and reports on stock status and health, bycatch, habitat status, social and economic impacts of management measures, and sustainability of fishing practices." *Id.* 16 U.S.C. 1852(g)(1)(B).

Paragraph (c)(6) of the final action, which is substantively unchanged from the proposed action, clarifies that the SSC, and not a peer review process, provides recommendations to a Council for developing annual catch limits (ACLs). MSA section 302(h)(6) states that: "Each Council shall . . . develop annual catch limits for each of its managed fisheries that may not exceed the fishing level recommendations of its scientific and statistical committee or the peer review process established under subsection (g)." 16 U.S.C. 1852(h)(6). A possible interpretation of this section is that a Council could not exceed the fishing level recommendation of either the SSC or optional peer review process established under MSA section 302(g)(1)(E); if both provided recommendations, the lower of the two levels would be the limit. However, section 302(g)(1)(B) requires that each SSC: "Shall provide its Council ongoing scientific advice for fishery management decisions, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield and achieving rebuilding targets . . ." The SSC's acceptable biological catch (ABC) recommendation is the fishing level recommendation that is most relevant for developing an ACL.

As explained in the proposed action, NMFS believes that, when read in conjunction with MSA section

302(g)(1)(A)–(B), MSA section 302(h)(6) does not mean that a peer review process displaces the SSC's role in providing fishing level recommendations and other advice to its Council. A better reading of the two subsections is that they allow for development of fishing level recommendations either through the SSC or a peer review process, but ultimately, it is the SSC that provides final scientific advice to its Council. The purpose of a peer review process is to ensure the quality and credibility of scientific information, rather than directly providing scientific advice to a Council.

As reflected in § 600.315(b)(1)(ii) of the revised NS2 guidelines, a peer review process per MSA section 302(g)(1)(E) should be conducted early in the scientific evaluation process, in order to provide the SSC with a reasonable opportunity to review the peer review report and make recommendations to the Council. Section 600.315(c)(5) states that the SSC may provide a recommendation to its Council that is inconsistent with the findings of a peer review, in whole or in part, but in such cases the SSC should prepare a report outlining the areas of disagreement and the rationale and information supporting the SSC's determination. The revised NS2 guidelines also state that the SSC evaluation of peer review findings should be complementary to the overall scientific review process for the purpose of providing advice to its Council, and the SSC should not repeat a previously conducted technical peer review.

The revised NS2 guidelines state that an SSC member may participate in a peer review established pursuant to MSA section 302(g)(1)(E) when beneficial due to the expertise and regional knowledge of the SSC member, or when such participation would assist the SSC as a whole in its advisory role to the Council. If the SSC as a body or individual members of an SSC participate in a peer review established pursuant to MSA section 302(g)(1)(E), the SSC member(s) must meet the peer reviewer selection criteria as described in paragraph (b)(2) of the guidelines. For an SSC member or the SSC as a body to participate in a peer review, the guidelines require screening the SSC member(s) for conflicts of interest pursuant to NOAA's Policy on Conflicts of Interest for Peer Reviews Subject to OMB's Peer Review Bulletin. That policy prevents review of one's own work. Furthermore, the NS2 guidelines provide that the review and evaluation of scientific information by the Councils' SSCs should be transparent,

and should include the recording of minority viewpoints.

Some public comments focused on the evaluation and recommendations of the SSCs on the scientific information for catch-level specifications and pertinent measures of uncertainty. These issues were addressed in the MSA National Standard 1 (NS1) guidelines (74 FR 3178, January 16, 2009), and may be further refined in a subsequent update of the NS1 guidelines. (See 77 FR 26238, May 3, 2012.)

#### *D. Stock Assessment and Fishery Evaluation (SAFE) Reports*

The Secretary of Commerce (Secretary) has the responsibility for preparation and review of SAFE reports. The current NS2 guidelines state that the SAFE report is a document or set of documents that provides the Secretary and Councils with a summary of scientific information. The existing guidelines also contain specifications on the contents of SAFE reports. The revised NS2 guidelines provide further clarification on the purpose and content of the SAFE report. Specifically, they provide guidance on the scientific information that should be included in the SAFE report to enable the SSC to fulfill its role in providing its Council with ongoing scientific advice for fishery management decisions.

Some comments suggested that a SAFE report should be a single report; however the revised NS2 guidelines maintain the language from the previous NS2 guidelines that describes the SAFE report as a document or set of documents. This is necessary to provide the Secretary flexibility in the preparation of the SAFE report and accommodate differing regional practices with regard to the SAFE report. The revised NS2 guidelines clarify that the SAFE report should include essential fish habitat (EFH) information, in accordance with the EFH provisions contained in § 600.815(a)(10), as a stand-alone chapter or clearly noted section.

The revised NS2 guidelines contain provisions intended to facilitate the use of information in the SAFE reports and its availability to the Councils, NMFS, and public. For example, the NS2 guideline revisions specify, as recommended by public comments, that SAFE reports or similar documents must be made available by the Council or NMFS on a Web site accessible to the public, and that they include a summary of the information they contain and an index or table of contents of each component that comprises the SAFE report.

#### *E. Fishery Management Plan (FMP) Development*

This final action maintains the current NS2 guidelines language on FMP development, with only minor changes to the organization of the text.

#### **IV. Responses to Comments**

NMFS received comments from constituents, regional fishery management councils and the general public on the proposed guideline revisions, and most of the commenters were supportive of the standards proposed for using the best scientific information available and having robust peer review processes. Commenters provided useful recommendations that were carefully considered during development of the final NS2 guidelines.

#### *BSIA Criteria*

*Comment 1:* One commenter stated that the proposed guidelines were lengthy, detailed, and prescriptive regarding what constitutes BSIA and how BSIA should be used. The commenter stated that this prescriptiveness may lead Councils and SSCs to conform to inappropriate or overly restrictive approaches, or open the door to legal challenge based on procedural technicalities.

*Response:* NMFS disagrees. The revised NS2 guidelines are advisory guidelines that do not have the force and effect of law. In the revised guidelines, NMFS adopted the NRC (2004) recommendations on what constitutes BSIA for improving fisheries management. Most commenters supported the inclusion of language outlining appropriate criteria of relevance, inclusiveness, objectivity, transparency and openness, timeliness, verification and validation, and peer review for evaluating BSIA. Furthermore, the guidelines are consistent with the Information Quality Act and the OMB Peer Review Bulletin requirements for improving the integrity of scientific information. This action is not overly prescriptive and provides sufficient flexibility to adopt new scientific protocols for data collection and analysis; as stated in paragraph (a)(5): "Science is a dynamic process, and new scientific findings constantly advance the state of knowledge."

*Comment 2:* One commenter suggested including additional clarification regarding the difference between "established" and "emergent" science as described by the American Fisheries Society and the Estuarine Research Federation (AFS/ERF). Other comments requested clarification of the

language in paragraph (a)(4): "Scientific information includes, but is not limited to, factual input . . ."

*Response:* NMFS has added language in paragraph (a)(4) that clarifies the difference between "established" and "emergent" science. The AFS/ERF committee was established to consider what determines the best available science for natural resource policies and management, and its 2006 report (Fisheries 31(9):460-465) distinguished "established" science as scientific knowledge derived and verified through the scientific process that tends to be agreed upon without controversy. "Emergent" science was defined as relatively new knowledge that is still evolving and being verified, therefore, potentially controversial because it is open to debate. Therefore, paragraph (a)(4) was revised to emphasize that: "Emergent science should be considered more thoroughly, and scientists should be attentive to effective communication of emerging science."

*Comment 3:* Some commenters recommended changing the phrase "best scientific information available" to other phrases such as "best data available," "best scientific data possible" or "best scientific information possible," suggesting that the modifiers "best" and "available" might result in a precedence for referring to scientific guesses and poorly done science or disputes over scientific information used in management.

*Response:* NMFS disagrees because the phrase "best scientific information available" is taken directly from NS2 in the MSA. See 16 U.S.C. 301(a)(2).

*Comment 4:* One commenter suggested modifying paragraph (a)(1) as follows: "Successful fishery management depends, in part, on the thorough analysis of this information, and the extent to which the information is applied for: (i) Evaluating the impact that conservation and management measures will have on living marine resources, essential fish habitat (EFH), marine ecosystems, fisheries participants, fishing communities, and the nation; (ii) Identifying areas where additional management measures are needed; and (iii) Evaluating the consequences of not taking management actions when and where necessary."

*Response:* NMFS agrees to add the language as recommended in (i) and (ii) which conveys important considerations for the success of fishery management. However, the suggested language for (iii) is not accepted because section 302(h) of the MSA requires Councils to prepare an FMP or amendments thereto for each fishery under its authority in need of

conservation and management. Therefore, not taking management action when and where necessary is not an option.

*Comment 5:* Commenters requested that the revised NS2 guidelines add environmental conditions (e.g., weather modeling) to the types of scientific data considered in marine conservation and management, and should specify that historical information shall include the use of weather (e.g., wind, air temperature, water temperature, and wave height data) and economic conditions (e.g., fuel prices) as all of these have tremendous effect on the fishery participation and effort estimates.

*Response:* NMFS agrees that environmental information is potentially useful for fisheries management. Ecological information mentioned in paragraph (a)(1) includes interactions of species with their environment, including the physical environment. The guidelines avoid being too prescriptive by not providing an exhaustive list of potential types of scientific information. The term "environmental" was inserted into the following sentence to be more inclusive: "Fishery conservation and management require high quality and timely biological, ecological, environmental, economic, and sociological scientific information to effectively conserve and manage living marine resources." 50 CFR 600.315(a)(1).

*Comment 6:* Two commenters noted that there is no consideration of how the BSIA principles enshrined in the MSA should be applied to NMFS in pursuit of its responsibilities under the Endangered Species Act (ESA) or the Marine Mammal Protection Act (MMPA), and the NS2 guidelines should also specify that criteria for BSIA and peer review standards should be applicable to these other statutes.

*Response:* The National Standards and associated guidelines are specific to fishery management measures developed and promulgated under the MSA. The ESA and MMPA are separate laws with their own implementing regulations and science policies. Changes to those regulations and policies are beyond the scope of this action.

*Comment 7:* Some commenters suggested that the NS2 guidelines should provide more guidance for NMFS and Councils' SSCs to address the lack of scientific information, resolve critical data gaps, and specify that investments in time, effort, and funding are required to turn data poor fisheries into data rich fisheries. One commenter recommended that the NS2

guidelines include the statement: "For fisheries that are data poor and require management, every effort should be made to collect data that will increase the certainty of needed management actions." Another commenter suggested that paragraph (a)(3) should state: "In information-limited situations where simpler tools and assessment methods are warranted, scientific advice should be accompanied by recommendations for prioritizing data-needs in the short and long-term to move the fishery into a higher data category and improve assessment methods." One commenter also suggested adding, "identification of future research areas and funding priorities" to the end of the list of research-plan elements in paragraph (a)(5).

*Response:* NMFS did not add the suggested language because the revised guidelines adequately address the importance of the evaluation of uncertainty, identification of data gaps, and assessment of risks associated with limited information when developing fishery management actions. NMFS also believes that funding and priorities for resolving data gaps are best addressed by the peer review and research prioritization processes of the Secretary and Councils.

*Comment 8:* Some commenters expressed concern about the evaluation of uncertainty and data gaps in scientific information and the effect on SSC and Council decision-making. The commenters reported that their experience thus far indicates that a lack of information merely results in reduced quotas and fishing effort so as not to trigger the annual catch limit (ACL) or accountability measures (AM) thresholds pursuant to MSA requirements. Some recommended that the NS2 guidelines should provide guidance on how uncertainty should be addressed beyond the guidance that is provided in the proposed rule. One commenter recommended a more cautious interpretation of findings where uncertainty is high in order to ensure conservation of data-poor species and provide an incentive to collect the necessary information. Some commenters suggested adding language stating that sources of uncertainty must be considered and accounted for to the maximum extent possible.

*Response:* The revised NS2 guidelines have sufficient, but not overly prescriptive, language on the importance of addressing uncertainty in scientific information. For example, paragraph (a)(2), states: "Scientific information that is used to inform decision making should include an evaluation of its uncertainty and

identify gaps in the information." Further guidance for addressing uncertainty is covered in the NS1 guidelines. 50 CFR 600.310(f)(4) and (6).

*Comment 9:* One commenter suggested that the statement in paragraph (a)(2): "Limitations in scientific information may not be used as a justification for delaying fishery management actions," presupposes that in the absence of information, management actions should be taken even if there may be compelling reasons for not taking action until more information is known. The commenter recommended that in such circumstances, the NS2 guidelines need to allow for evaluation of a no action alternative in the absence of scientific information and should assess the consequences of action versus no action.

*Response:* NMFS struck the sentence at issue in paragraph (a)(2) because the concept of not delaying management actions due to limitations in scientific information is adequately addressed in paragraph (a)(6)(v). In response to the comment, the NS1 guidelines identify the need for a precautionary management response in the face of uncertainty, and the lack of data generally suggests the need for more precaution, but not inaction.

*Comment 10:* One commenter recommended that the NS2 guidelines establish a conservative precautionary default for each FMP in case of delays or problems with scientific information. Specifically, the more dated the scientific information used to support fishery management actions, the more caution should be used in setting the acceptable biological catch (ABC) level when there is uncertainty. NMFS should require the SSCs and Councils to be more conservative in their management decisions and to err on the side of precaution to reduce the risk of overfishing. If a Council delays management action, NMFS must step in and implement this precautionary default.

*Response:* It is beyond the scope of the NS2 guidelines to address the level of precaution needed to manage fisheries resources. The NS1 guidelines address the need for precaution, including a requirement that scientific uncertainty be taken into account when the SSC makes recommendations to its Council regarding acceptable biological catch (ABC) levels. The role of the NS2 guidelines is to assure that uncertainty is calculated as accurately as possible so that it can be taken into account consistent with the NS1 guidelines.

*Comment 11:* One commenter recommended an increased focus on economic impacts on coastal



communities in all fishery management decisions, and greater transparency as to how the various factors, including economic considerations, are weighted.

*Response:* National Standard 8 requires consideration of impacts on fishing communities when developing fishery conservation and management measures. The NS2 guidelines emphasize the importance of high quality and timely social and economic information for evaluating the impact that conservation and management measures will have on fishing communities, as well as living marine resources, essential fish habitat, marine ecosystems, fisheries participants and the nation.

*Comment 12:* One commenter, noting the increasing complexity of fisheries models, both for stock assessment and for social and economic analyses, recommended adding language in paragraph (a)(4) to reflect that system complexity will inevitably lead to more complex decision making models, especially in ecosystem based management, where stock assessments, social impacts and environmental systems are integrated into a single model or series of inter-connected models.

*Response:* Although efforts to take into account the full complexity of ecosystems and fisheries may lead to complex models, NMFS disagrees that this would inevitably lead to complex decisions. A range of model complexities, commensurate with data availability and management questions, is anticipated by NMFS to meet the needs of the Councils.

*Comment 13:* One commenter recommended directing fishery managers to use scientific information at the ecosystem level.

*Response:* Paragraph (a)(6)(i) of the revised NS2 guidelines directs that an important criteria for evaluating BSIA is its relevance to the current questions or issues under consideration. Thus, the guidelines provide that if it is appropriate for ecosystem level scientific information to be considered or included in a particular analysis, managers should consider such information. Further guidelines are not necessary.

*Comment 14:* One suggestion was provided to change the term "data-poor" to "information-limited" because even data-rich fisheries can be information-limited and require the use of proxies if certain crucial data are missing or highly uncertain.

*Response:* NMFS agrees and added the term "information-limited" to paragraph (a)(3) of the revised NS2 guidelines.

*Comment 15:* One commenter requested clarifying the use of "surveys or sampling programs" to determine if this includes only underwater sampling and fishing catch collections, or whether "survey" also includes non-scientific telephone and dockside questionnaires. The commenter recommended discontinuing the use of phone surveys and instead using information from fishing license applications and species endorsements.

*Response:* NMFS uses a range of surveys and sampling programs, including phone surveys, to collect scientific data from commercial and recreational fisheries. NMFS surveys that directly gather information from the public or business entities, including phone surveys administered by the NMFS Marine Recreational Information Program, have been reviewed and meet the rigorous OMB standards for survey methodologies employed by the Federal government. See OMB Guidance on Agency Survey and Statistical Information Collections (January 20, 2006).

*Comment 16:* One commenter questioned using peer review as a criteria for evaluating what constitutes BSIA, stating that external peer review, outside the normal SSC process, should not be a separate and mandatory criteria for determining BSIA, particularly because the use of peer review is discretionary in MSA section 302(g)(1)(E). The commenter recommended that external peer review should be an optional tool, best used in circumstances of significant controversy regarding scientific information. Another commenter recommended changing: ". . . peer review, as appropriate; and communication of findings" in paragraph (a)(5) to: "shall include peer review; and subsequent communication of findings."

*Response:* Paragraph (a)(6) of the revised NS2 guidelines does not mandate peer review in all cases, but simply lists peer review as one of many criteria for evaluating BSIA, to be used as appropriate. We believe the guidelines should be flexible, therefore paragraph (a)(5) calls for peer review "as appropriate" as an element of a sound research plan. The revised NS2 guidelines state that the Secretary and Council have discretion to establish a peer review process as provided in section 302(g)(1)(E) of the MSA and that: "peer review should be used when appropriate."

*Comment 17:* Paragraph (a)(6) of the proposed guidelines stated that: "Principles for evaluating best scientific information must be based on relevance, inclusiveness, objectivity, transparency

and openness, timeliness, verification and validation, and peer review, as appropriate." One commenter suggested changing "must" to "should." Another recommended eliminating "as appropriate" and requested that the SSC should consider peer reviewed scientific information above non-peer reviewed scientific information.

*Response:* NMFS changed the quoted sentence in the revised guidelines to: "Criteria to consider when evaluating best scientific information available are relevance, inclusiveness, objectivity, transparency and openness, timeliness, verification and validation, and peer review, as appropriate." The criteria for evaluating BSIA were adopted from the recommendations of the NRC (2004) on the application of BSIA principles in the development of fishery conservation and management measures. In response to the comments above, the change in paragraph (a)(6) was made to emphasize that these are criteria or factors to be considered when evaluating BSIA, not mandatory elements that must be met in all cases.

*Comment 18:* One commenter objected to the use of a management strategy based on a proxy derived from another geographic area and different species to judge the responses of industry participants or business decisions, and recommended use of socio-economic data from the affected management area. Another commenter requested clarification on how the proxy, related species, and other geographical information could be used in modeling in data poor situations as specified in paragraph (a)(6)(i).

*Response:* The NS1 guidelines address the use of a proxy or indicator species for specifying maximum sustainable yield (MSY) in data-limited situations. See 50 CFR 600.310(e)(1)(iii) and (iv). Although the use of proxies is acknowledged as a useful tool in data limited situations, NMFS has revised in paragraph (a)(6)(i) the phrase "powerful tool" to "may be a useful tool" in the final NS2 guidelines to ensure proxies are not used unnecessarily.

*Comment 19:* Commenters supported consideration of relevant local and traditional knowledge (LTK) when evaluating scientific information to support fishery management actions, particularly in data limited situations and for fisheries in regions comprised of diverse indigenous communities with extensive traditional and local ecological knowledge. Commenters recommended specifying that collection of LTK must be consistent with appropriate scientific methods, undergo scientific review, and peer review, which may include indigenous

fishermen and hunters as well as researchers from other relevant disciplines to evaluate the sources and methods of recording LTK. They additionally suggested adding standards and procedures for incorporating LTK into the scientific process to increase Councils' confidence in its use.

*Response:* NMFS agrees that using LTK in support of fishery management actions is important, and recognizes that there are various ways that LTK can be utilized in the fishery management process, including experiential LTK knowledge from both indigenous and non-indigenous sources. NMFS encourages the development of scientific approaches to collection and evaluation of LTK, but does not believe the NS2 guidelines should prescribe appropriate collection and evaluation of LTK.

*Comment 20:* With respect to the language in paragraph (a)(6)(ii)(C): "To the extent possible, an effort should be made to reconcile scientific information with local and traditional knowledge," commenters recommended removing "reconcile" because it implies that scientific information must be made consistent with LTK, or vice versa, if there is a discrepancy. The use of "reconcile" could be misconstrued to mean that scientific information needs to be reconciled to conform to LTK information. LTK should not be required to be validated by another form of science for it to be incorporated or factored into a decision.

*Response:* NMFS agrees and will remove "reconcile" to ensure that LTK information is acknowledged and evaluated along with other scientific information. NMFS agrees that reconciliation of LTK and other information should not be necessary for Councils to consider both types of information. Where the two types of information directly conflict and both have been validated through their respective review processes (SSC and LTK review subcommittee), the Councils should adopt an approach that takes account of the uncertainty inherent in this conflict.

*Comment 21:* One commenter requested that paragraph (a)(6)(iii) identify what constitutes "non-scientific considerations" and clearly define "standards for objectivity" for scientific information. The commenter suggested that the final NS2 guidelines should describe the process for establishing, documenting, and evaluating compliance with the standard of objectivity.

*Response:* NMFS agrees that the proposed rule language should be clarified and has revised paragraph

(a)(6)(iii) to read: "Objectivity. Scientific information should be accurate, with a known degree of precision, without addressable bias, and presented in an accurate, clear, complete, and balanced manner. Scientific processes should be free of undue nonscientific influences and considerations." Non-scientific considerations include activities that negate the attributes of scientific standards, such as verification, validation, and approval by scientific review, as indicated in the BSIA section of the guidelines.

*Comment 22:* Most commenters supported the importance of transparency as specified in the proposed guidelines, while some expressed concern that more public transparency was needed during the scientific peer review and fishery management meetings. One commenter stated the entire review process should be transparent and recommended paragraph (a)(6)(iv)(B) specify all rationale for excluding data from analysis must be clearly explained.

*Response:* The NS2 guidelines emphasize that vetting of scientific information should be open and public. Moreover, the guidelines are consistent with MSA section 302(i)(2)(A) which provides broad public and shareholder access to the Councils' fishery conservation and management process. See 16 U.S.C. 1852(i)(2)(A). No change was made regarding paragraph (a)(6)(iv)(B) because it already states that: "Scientific information products . . . should explain any decisions to exclude data from analysis."

*Comment 23:* Two commenters expressed concern that paragraph (a)(6)(iv) suggests that a researcher must allow general public comments on all phases of research design, collection, and analysis. Without technical expertise, the public could not provide constructive comments from an analytical perspective, and the requirement to allow public comment during each stage of the scientific process would be cumbersome and result in delay, inhibit the scientific process, or politicize the research itself. Another commenter recommended requiring public comment on reports of uncertainty, statistical error, data limitations, and decisions to exclude data from analyses.

*Response:* To address the concern, in paragraph (a)(6)(iv) NMFS struck the text: "the public should have access to each stage in the development of scientific information," and revised the paragraph to read: "Public comment should be solicited at appropriate times during the review of scientific information." The goal of these revised

guidelines is to provide flexibility while emphasizing the importance of both public access to the scientific information used to support fishery management actions and public comment. Transparency of scientific data and analytical methods is a precondition for reproduction by others of the analyses of scientific information as noted in the verification section.

*Comment 24:* One comment suggested adding after paragraph (a)(6)(iv)(B) a new paragraph as follows: "(C) The reports of the SSC shall contain an analysis of the certainty of the findings and shall clearly state a confidence factor in the validity of the information and analysis in the form of a percentage of the reliability of the information provided."

*Response:* NMFS does not agree with prescribing that the SSC report uncertainty in a particular way. There are many ways to characterize uncertainty, and there is no way to predetermine a particular level of uncertainty. Transparency regarding uncertainty is adequately addressed in paragraph (a)(2) of the revised guidelines that states: "Scientific information that is used to inform decision making should include an evaluation of its uncertainty and identify gaps in the information."

*Comment 25:* One commenter requested that the Councils be required to provide adequate time in their decision-making process to have scientific information analyzed and subjected to appropriate review before it is used to inform fishery management decisions, and that NMFS and the Councils establish benchmark stock assessment peer reviews sufficiently far in advance of SSC review and recommendations to its Council. Another commenter suggested changing "must be brought forward" to "may be brought forward" in paragraph (a)(6)(v)(B) on timeliness.

*Response:* The timing of a Council's decision-making process is not within the scope of the NS2 guidelines. However, NMFS agrees with the second commenter and has changed the language in paragraph (a)(6)(v) to "may be considered for use."

*Comment 26:* One commenter recommended that paragraph (a)(6)(vi) regarding verification and validation be moved to the Peer Review portion of the guidelines in paragraph (b) because unrealistic demands for validation and verification could be misused to delay action under the guise of requiring more research to validate uncertain information. The commenter believes the methodological considerations with using verification and validation to

evaluate BSIA are better addressed as subordinate points in the peer review section.

*Response:* NMFS retains the verification and validation section in the BSIA portion of the guidelines because these are important requirements of science that should be undertaken regardless of whether the science is peer reviewed. Verification is used to document scientific data collection and analytical procedures and NMFS routinely publishes sampling procedures for all of its major survey programs. Validation is the requirement to test scientific methodology and is also routinely done independently of peer review. The peer review section focuses on standards for conducting a peer review, such as the form of the review or criteria for selection of reviewers. The terms of reference for a specific peer review can require reviewers to determine if the science has been validated and verified. Paragraph (a)(6)(v) explicitly addresses delay concerns by stating that: "Management decisions should not be delayed due to limitations in the scientific information or the promise of future data collection or analysis."

*Comment 27:* One commenter suggested editing paragraph (a)(6)(vi)(B) to state: ". . . the accuracy and precision of the estimates are adequate."

*Response:* NMFS revised paragraph (a)(6)(vi)(B) to include both "accuracy and precision" as important in estimates, and further clarified the importance of accuracy by adding: "Models should be tested using simulated data from a population with known properties to evaluate how well the models estimate those characteristics and to correct for known bias to achieve accuracy."

*Comment 28:* Paragraph (a)(6)(viii) of the proposed guidelines states: "To the extent practicable, the scientific information that supports substantial fishery management alternatives considered by a Council should be peer reviewed." Some commenters noted that peer review addresses scientific issues. This language implies that the peer review could apply to policy matters, including fishery management decisions, thereby undermining the role of the Councils as primary policy making bodies. One commenter stated that the NS1 guidelines distinguish between the scientific process (determination of overfishing levels (OFL) and ABC) and the management process (determination of ACL, annual catch target, and management measures), and that both processes are interdependent and closely linked. Although the scientific peer review

process is well established, commenters expressed concern that the management process does not currently undergo a similar review process. Another commenter recommended that the NS2 guidelines advise the use of management strategy evaluation (MSE) or alternative technology, to support the peer review of management alternatives. MSE, which involves evaluating the tradeoffs and performance of different management alternatives, is a type of management tool for evaluating management alternatives that produce feedback into the stock assessment process.

*Response:* To clarify that peer review pertains to scientific information, NMFS has revised paragraph (a)(6)(vii) to read: "The scientific information that supports conservation and management measures considered by the Secretary or a Council should be peer reviewed, as appropriate." In regard to comments suggesting that management alternatives must be reviewed, the choice between management alternatives is a policy decision and is outside the scope of the NS2 guidelines. The intent is not to peer review the Council's management decisions, but rather to ensure, as required by NS2, that conservation and management measures are based on BSIA. To that end, paragraph (a)(6)(vi)(B) provides: "The concept of validation using simulation testing should be used, to the extent possible, to evaluate how well a management strategy meets management objectives."

#### *Peer Review Standards*

*Comment 29:* Many comments supported the inclusion of the current OMB peer review requirements in the NS2 guidance, as appropriate, and the establishment of peer review processes pursuant to MSA section 302(g)(1)(E). Some commenters requested changing the heading of paragraph (b) to "Optional Peer Review" so that the standards apply only to optional peer reviews. Some commenters requested further guidance on when an independent peer review should occur and expressed concern with an "optional" peer review because this could indicate that the Councils, SSCs and agency are disinterested in utilizing this process. Other comments requested more prescriptive language including how or when peer review should be conducted, and by whom, especially when there is significant controversy regarding the scientific information on which fishery management decisions will be based. One commenter emphasized that the NS2 guidelines should require that each Council, working with the Secretary, determine

whether an optional external peer review process is warranted, whereas others opposed the implication that an external peer review may be necessary, stating: "The Council has sole discretion to establish a supplemental peer review."

*Response:* NMFS does not agree that the peer review section should be titled "optional peer review." MSA section 302(g)(1)(E) and the revised NS2 guidelines adequately convey that this is an optional, not mandatory peer review process. The language in section 302(g)(1)(E) clearly states that: "The Secretary and each Council may establish a peer review process for that Council. . . ." 16 U.S.C.1852(g)(1)(E) (emphasis added). Thus the Secretary and each Council have the discretion, working together, to establish a peer review process. Under the revised guidelines, the Secretary and Councils have the necessary flexibility to continue to use and improve their existing peer review processes. See response to Comment 36 for factors to consider when determining whether to conduct a peer review, and if so, the appropriate level of review.

*Comment 30:* Commenters asked for clarification on the SSC's role as an advisory body to the Council and the SSC's participation in a peer review process established pursuant to MSA section 302(g)(1)(E). Some commenters requested that paragraph (b) of the revised guidelines clarify that the SSC is the primary and final peer reviewer for scientific information. One commenter stated that MSA section 302(g)(1)(E) was specifically crafted to allow SSCs to function as the primary peer review panel and that the SSC peer review satisfies the Information Quality Act requirements. Another commenter opposed the use of external peer reviewers, and stated that MSA section 302(g)(1)(E) allows Councils to use their own SSC as an optional peer review process at the discretion of the Council. One commenter stated the guidance in paragraph (b) should be for use only when a Council decides to use an external peer review, and that additional peer reviews beyond the SSC would further lengthen the Council process and should be avoided. Contrary to this, other commenters stated the SSC should not participate in peer reviews, but rather all peer reviews should be independent and external to the SSC process.

*Response:* MSA section 302(g)(1)(E) gives the Secretary and Councils the discretion to establish a peer review as appropriate, and does not preclude Councils from using their SSCs for peer review. Paragraph (b) of the revised NS2



guidelines: "provides guidance and standards that should be followed in order to establish a peer review process per [MSA] section 302(g)(1)(E)." NMFS does not agree that MSA section 302(g)(1)(E) states that SSC peer review alone satisfies IQA requirements, but rather, that a peer review process established by the Secretary and a Council is deemed to satisfy IQA requirements. NMFS believes that further revision to the guidelines is unnecessary because they are consistent with the MSA and clearly provide that the SSC, as a body or its members, may participate in peer review. The guidelines are clear that this discretionary peer review process is not meant to supplant the role of the SSC.

*Comment 31:* A commenter requested that the agency clarify whether the Secretary has the authority to veto a decision by a Council to establish a peer review process pursuant to MSA section 302(g)(1)(E), or whether the Council may proceed as it deems appropriate subject to ultimate Secretarial review of the consistency of the FMP with the MSA. The commenter recommended the latter view as the appropriate policy.

*Response:* NMFS disagrees with the suggested interpretation of MSA section 302(g)(1)(E) because that section clearly states that: "the Secretary and each Council may establish a peer review process for that Council. . . ." The establishment of a peer review process is a joint Secretary-Council activity. NMFS disagrees with the suggestion that the Council may proceed as it deems appropriate, subject to ultimate Secretarial review. It is important to note that joint Secretary-Council establishment of a peer review process does not supplant the Secretarial authority to review consistency of Council fishery management plans, amendments or other actions with the MSA and other applicable law.

*Comment 32:* Commenters requested further clarification on the text in paragraphs (b)(1), and (c)(4) regarding duplicating or repeating peer reviews. One commenter expressed concern that the paragraphs could potentially restrict the SSC re-evaluation of peer-review reports. Commenters stated that the guidelines should have flexibility to allow for additional analysis within any review process that is complementary and not duplicative.

*Response:* As discussed in response to comment 30, *supra*, paragraph (b) of the revised guidelines explicitly states that: "A peer review process is not a substitute for an SSC and should work in conjunction with the SSC." Paragraph (c)(4) of the guidelines provides that the SSC evaluation of peer

review findings should be complementary to the overall scientific review process for the purpose of providing advice to its Council, and the SSC should not repeat a previously conducted technical peer review because of disagreement with peer review findings. NMFS believes that these provisions allow for sufficient flexibility and therefore, no changes were made to paragraphs (b)(1), or (c)(4).

*Comment 33:* Commenters supported paragraph (b)(4) that specifies: "The Secretary will announce the establishment of a peer review process under [MSA] section 302(g)(1)(E) in the Federal Register along with a brief description of the process" while other commenters were concerned that the proposed guidelines do not acknowledge the existing stock assessment review processes (SAW/SARC, SEDAR, STAR and WPSAR) as being consistent with the MSA section 302(g)(1)(E) review process. Two commenters recommended that the Secretary clearly identify which existing Council committees or panels meet the NS2 guideline standards, in order to avoid confusion, prevent duplication and improve the ability of NMFS and the Councils to determine the appropriate type of peer review required for particular information.

*Response:* The revised guidelines are consistent with the language in MSA section 302(g)(1)(E) that a peer review process established by the Secretary and a Council may include existing committees or panels. However, as with all other processes, in order to be recognized formally as MSA 302(g)(1)(E) processes, the same process as described in (b)(4) of the revised guidelines must be followed, culminating in an announcement of the formal designation in the Federal Register. NMFS disagrees that such determinations are made only by the Secretary, thus the guidelines provide for a role for both the Secretary and the relevant Council in making MSA section 302(g)(1)(E) determinations.

*Comment 34:* One commenter criticized the language in paragraph (b)(1)(iii) of the revised guidelines arguing that policy considerations are in the purview of the Secretary and the Councils. Some commenters suggested that the decisions on all fishery management plans should be peer reviewed. Another commenter requested clarification on "scientific" and "policy" reviews and suggested distinguishing scientific uncertainty as a matter for scientific peer review and risk tolerance as a matter for policy peer review.

*Response:* NMFS agrees that clarification would be helpful and has revised paragraph (b)(1)(iii) to read: "The scope of work may not request reviewers to provide advice on policy or regulatory issues (e.g., amount of precaution used in decision-making) which are within the purview of the Secretary and the Councils, or to make formal fishing level recommendations, which are within the purview of the SSC."

*Comment 35:* Some commenters suggested that the scope of peer reviews should include all stages of the scientific process. One commenter suggested that the guidelines should require all data and science used by NMFS or the Councils be subjected to peer review before being used to inform management decisions.

*Response:* NMFS agrees that the scope of peer review should include all stages of the scientific process and has clarified in paragraph (b)(1)(iii) that the scope of peer reviews includes "evaluation of the various stages of the science." NMFS disagrees that all data and science should be peer reviewed because such a requirement would be impractical, not required in all cases, and would cause significant delays in the fishery management process.

*Comment 36:* Some commenters requested more specificity regarding what types of scientific information must be peer reviewed. One commenter recommended that paragraph (b)(1)(i) be revised not simply to provide the Secretary and Council with discretion to determine appropriate peer review processes, but to require them to identify major products they receive and to establish criteria for determining the appropriate peer review for each. An SSC peer review or other independent form of review should occur when significant revisions are made to a benchmark assessment. Another commenter stated that all benchmark assessments should be subject to a formal external review, and the reviewers must be independent from the science to be reviewed, such as reviewers drawn from the Center for Independent Experts (CIE) or another comparable outside organization.

*Response:* NMFS believes the revised NS2 guidelines provide sufficient guidance as to the necessity of and appropriate scope of peer review in paragraph (a)(6)(vii). This guidance is adopted from and consistent with the OMB peer review requirements. For peer reviews requiring a greater degree of independence, such as benchmark assessments, the Secretary and Councils routinely use independent reviewers,

including reviewers who are selected through the CIE process.

*Comment 37:* Commenters supported peer reviews being conducted early in the process of producing scientific information. Some commenters suggested further guidance on the timing of peer review. Another commenter suggested that NMFS and the Councils must provide compelling justification for foregoing established peer review processes.

*Response:* NMFS understands the importance of and need for conducting timely peer review to ensure that peer review findings are available to an SSC and its Council. NMFS has revised paragraph (b)(1)(ii) of the guidelines to read: "The peer review should, to the extent practicable, be conducted early in the process of producing scientific information or a work product so peer review reports are available for the SSC to consider in its evaluation of scientific information for its Council and the Secretary."

*Comment 38:* Two commenters recommended that peer review should be a tool used to review the SSC's advice, while other commenters stated that the peer review process should be used to inform the Council's SSC.

*Response:* NMFS disagrees that peer review should be used to review the SSC's advice because, as explained in paragraph (a)(6)(vii) of the guidelines: "Peer review is a process used to ensure that the quality and credibility of scientific information and scientific methods meet the standards of the scientific and technical community." Paragraph (c)(4) correctly states: "peer review of scientific information used to advise the Council, including a peer review process established by the Secretary and the Council under [MSA] section 302(g)(1)(E), should be conducted early in the scientific evaluation process in order to provide the SSC with reasonable opportunity to consider the peer review report and make recommendations to the Council as required under [MSA] section 302(g)(1)(B)."

*Comment 39:* Paragraph (a)(6)(v)(B) of the proposed guidelines stated that: "Management decisions should not be delayed due to data limitations or the promise of future data collection and analysis." One commenter suggested revising the text to make clear that peer reviews cannot be used to justify delay of management decisions either, especially if a stock is overfished or subject to overfishing.

*Response:* NMFS agrees that this is the intent of the text (which was moved to paragraph (a)(6)(v) of the revised guidelines) and revised it to clarify:

"Mandatory management actions should not be delayed due to limitations in the scientific information or the promise of future data collection or analysis."

NMFS also added new text in paragraph (b)(1)(ii) regarding timing of peer reviews. (See response to Comment 37 for explanation.)

*Comment 40:* A commenter suggested inserting additional text in paragraph (b)(1)(iii) providing that the scope of peer reviews should include findings and recommendations on missing information, future research, data collection, and improvements in methodologies and should also specify the type of expertise and balance of perspective for a review panel.

*Response:* Paragraph (b)(2)(i) states: "Peer reviewers must be selected based on scientific expertise and experience relevant to the disciplines of subject matter to be reviewed. The group of reviewers that constitute the peer review should reflect a balance in perspectives, to the extent practicable, and should have sufficiently broad and diverse expertise to represent the range of relevant scientific and technical perspectives to complete the objectives of the peer review." Therefore, NMFS believes that the guidelines sufficiently address expertise and balance of perspective for peer review. NMFS has revised paragraph (b)(1)(iii) to clarify that the scope of work should allow reviewers to make recommendations regarding "missing information, future research, data collection, and improvements in methodologies."

*Comment 41:* One commenter suggested revising paragraph (b)(2) to state that peer reviewer selection should be guided by the scope of work which, according to paragraph (b)(1)(iii), should be determined before selecting reviewers.

*Response:* NMFS believes the final rule has sufficient language to address the commenter's concern. Section (b)(1)(iii) specifies: "The scope of work or charge (sometimes called the terms of reference) of any peer review should be determined in advance of the selection of reviewers" and paragraph (b)(2)(i) states: "Peer reviewers must be selected based on scientific expertise and experience relevant to the disciplines of subject matter to be reviewed, including a balance in perspectives" to ensure the peer reviewer selection is guided by the scope of work.

*Comment 42:* One commenter recommended that the "group of reviewers" that constitute the peer review have sufficiently broad and diverse expertise, and should also be representative of all sectors of the resource that are to be effected (e.g.,

commercial interests, charter operators, party/head boat operators, and recreational interests).

*Response:* NMFS disagrees that scientific peer review must include representatives of all sectors with an interest in the resource. Input from such sectors occurs through the Council advisory panels, not through scientific peer review. The revised guidelines are clear on the peer reviewer qualification requirements of scientific expertise and experience relevant to the disciplines of subject matter to be reviewed, including a balance in perspectives.

*Comment 43:* One commenter suggested that paragraph (b)(2)(i) on expertise and balance, when read with paragraph (a)(6)(iii) on objectivity, appears to establish a process requiring public hearings and testimony before a group with "a balance in perspectives" that is formed in order to review "substantial fishery management alternatives."

*Response:* Peer reviews may require a balance in expertise and perspectives to review science that encompasses various disciplines, but seeking that balance should not involve consideration of non-scientific issues. NMFS provided clarification to show this is not the intent by revising paragraph (a)(6)(vii) to read: "the scientific information that supports conservation and management measures considered by the Secretary or a Council should be peer reviewed" to differentiate between reviewing science products and management actions.

*Comment 44:* One commenter expressed concern with the NS2 guidelines requiring a "balance of viewpoints" because a single individual would never meet this standard. The commenter recommended that the guidelines be revised to ensure a balance in the quality, number of perspectives, and number of reviewers.

*Response:* The language in paragraph (b)(2)(i) is not in reference to a single peer reviewer as the commenter suggested, but rather, the peer review body as a whole. NMFS revised the paragraph to clarify this point, as indicated in the response to Comment 40.

*Comment 45:* One commenter criticized the present peer review system claiming that NMFS controls all aspects of the process and stated that there should be outside or independent review of science used in support of fishery management actions, including data collection and analysis. The commenter stated that peer reviewers are "handpicked" by NMFS in the SEDAR peer review process. Another commenter recommended that members

of the peer review should not include members of the SEDAR, SSC, Advisory Panel, and the Council, thus eliminating potential sources for conflicts of interest.

*Response:* The final NS2 guidelines provide sufficient guidance to ensure that reviewers meet peer review standards consistent with the OMB's Peer Review Bulletin and the National Academies Policy on Committee Composition and Balance and Conflicts of Interest by specifying in paragraph (b)(2) that: "The selection of participants in a peer review should be based on expertise, independence, and a balance of viewpoints, and be free of conflicts of interest." Paragraph (c)(1) of the guidelines provides that: "SSCs may conduct peer reviews or evaluate peer reviews to provide clear scientific advice to the Council" consistent with MSA section 302(g)(1)(A). See 16 U.S.C. 1852(g)(1)(A). In regard to the comment on SEDAR reviews, the SEDAR reviews include external peer reviewers who are independently selected by a third party, the Center for Independent Experts, to meet rigorous peer review standards.

*Comment 46:* Comments were generally supportive of the requirement that peer reviewers must not have conflicts of interest and included suggestions for revising paragraph (b)(2)(ii). One commenter suggested that the phrases "real or perceived conflict of interest" and "any financial or other interest" may create ambiguity and the opportunity for inappropriate manipulation of the selection process. Another commenter recommended that the definition of conflicts of interest be further expanded to include advocacy conflict of interest or conflict of interest of a recipient of any consulting agreement, grant, or contract with NMFS. Another recommendation was to revise the text to be more specific about the conditions under which a conflict of interest is unavoidable such as when there is only one qualified reviewer available.

*Response:* In response to comments, NMFS revised paragraph (b)(2)(ii) to delete "real or perceived," but retained "any financial or other interest." NMFS also revised the text to specify: "For reviews requiring highly specialized expertise, the limited availability of qualified reviewers might result in an exception when a conflict of interest is unavoidable; in this situation, the conflict must be promptly and publicly disclosed." Consulting arrangements, grants and contracts are included as potential conflicts of interest in paragraph (b)(2)(ii)(B). Advocacy activities are adequately addressed in the NOAA Conflict of Interest policy,

which is incorporated by reference into the NS2 guidelines in paragraph (b)(2)(ii).

*Comment 47:* One commenter stated that the selection of peer reviewers should be based on expertise and qualifications exclusively. Thus, paragraph (b)(2)(iii) should be revised to eliminate "should rotate" and the presumption that past service on a peer review panel is a basis for exclusion from future service.

*Response:* The guidelines are clear on the importance of expertise and qualifications in the selection of peer reviewers, and the intent of the language on rotation of peer reviewers across the available pool of reviewers is to avoid a situation where a peer reviewer repeatedly reviews his or her scientific contributions from a previous review. Therefore, NMFS disagrees with the request to remove the language regarding rotating reviewers.

*Comment 48:* Commenters generally agreed that the names of reviewers must be made publicly available. However one commenter suggested the language in paragraph (b)(3), "Names and organizational affiliations of reviewers should be publicly available prior to review" should be revised because of a concern for interference in the selection of independent reviewers. Another commenter requested that the guidelines specify that the peer reviewer selection process be publicly transparent, including the rejection of a potential reviewer based on conflicts of interest.

*Response:* NMFS agrees that the peer review process should be as transparent as possible, including the public disclosure of the names and affiliations of the reviewers. However, NMFS agrees to remove the text "prior to review" to allow the option to withhold names of peer reviewers prior to review, when necessary. NMFS notes this practice is consistent with the OMB Peer Review Bulletin. NMFS disagrees with the suggestion of requiring public transparency of rejected potential reviewers because this is not required by the OMB peer review guidelines. Additionally, conflict of interest disclosure information for potential reviewers contains sensitive financial information that must be held in confidence.

*Comment 49:* Most commenters supported the requirement for transparency in the peer review process, but one commenter expressed concern that it is impractical for public participation in all peer reviews. For example, the public could not attend a peer review conducted as an external desk review where a report is sent by

email to the reviewer. Another commenter suggested that the guidelines appear to preclude any individual review, such as a desk review, because the guidelines imply that a review panel meeting is the only acceptable peer review process.

*Response:* Paragraph (b)(1)(i) specifies: "The Secretary and Council have discretion to determine the appropriate peer review process for a specific information product. A peer review can take many forms, including individual letter or written reviews, and panel reviews." Therefore, a review panel meeting is not the only acceptable peer review process under the revised NS2 guidelines. To ensure transparency of all types of peer reviews, NMFS revised paragraph (b)(3) to read: "A transparent process is one that ensures background documents and reports from peer review are publicly available . . . and allows the public full and open access to peer review panel meetings."

*Comment 50:* Some commenters requested that the guidelines specify that background documents be made publicly available 30 days prior to a peer review.

*Response:* NMFS believes that inclusion of a specified number of days would be overly prescriptive because there are various forms of peer review, some of which may require a more expedited timeline. We believe that the guidelines adequately emphasize the importance of timeliness and transparency in peer review.

*Comment 51:* One commenter suggested that the 14 day advanced notice of a peer review meeting specified in the action should be extended to provide a minimum of a 21 day notice period.

*Response:* In order to extend the advance notice, NMFS revised the language in paragraph (b)(3) to read as: "public notice of the peer review panel meetings should be announced in the Federal Register with a minimum of 14 days, and with an aim of 21 days, before the review to allow public comments during meetings."

#### *Role of SSC in the Review of Scientific Information*

*Comment 52:* NMFS received many comments regarding whether or not the SSC should participate in peer review. Some commenters argued that the peer review standards in the revised NS2 guidelines are unnecessary and inconsistent with the role of the SSC to function as the primary and final peer review for scientific information brought before the Council. One commenter requested that the NS2 guidelines be amended to specify that

the SSC functions as the primary peer review panel in all cases unless the Council decides otherwise, and that the SSC should not need to meet the conflict of interest standards in paragraph (b)(2) when conducting peer review. Contrary to this view, other commenters insisted that all peer reviews be independent and external of the SSC, and that SSC members should not participate in peer review. Many commenters expressed support for paragraph (c) on the advisory role of the SSC and participation of the SSC in peer review, and supported clarifying that the peer-review process complements, but does not replace, the role of the SSC to provide ongoing scientific advice to its Council for management decisions.

*Response:* A primary reason for revising the NS2 guidelines was to clarify the distinction between the advisory role of the SSC to its Council as specified in MSA section 302(g)(1)(B), 16 U.S.C. 1852(g)(1)(B), and the ability of the SSC to assist in peer review, as specified in MSA section 302(g)(1)(A), *id.* § 1852(g)(1)(A). NMFS carefully considered public comments received in response to the ANPR and proposed rule requesting clarification on the distinction between these provisions. The revised guidelines specify that peer review is separate from the SSC's subsequent activity to evaluate scientific information for the purpose of providing advice, such as fishing level recommendation, to its Council. The revisions are also consistent with MSA section 302(g)(1)(E) providing the Secretary and Councils with the discretion to establish a peer review process. NMFS disagrees with comments that the SSC may not assist in peer review, as we believe that view is contrary to the plain language of MSA section 302(g)(1)(A). The revised NS2 guidelines encourage SSC members to participate in a peer review when such participation is beneficial due to the expertise and institutional memory of that SSC member, or beneficial to the Council's advisory body by allowing that SSC member to make a more informed evaluation of scientific information for its Council. The revised guidelines also state that participation of an SSC member in a peer review should not impair the ability of that member to fulfill his or her responsibilities to the SSC. NMFS disagrees with the recommendation that SSC members be completely exempt from paragraph (b)(2) addressing peer reviewer selection, but revised paragraph (c)(3) so that the paragraph (b)(2) requirements only apply when the SSC as a body or individual SSC

members participate in a peer review process established under MSA section 302(g)(1)(E). The revision allows for less formal SSC review of information that is not novel, controversial or influential, such as a routine update of a stock assessment. Peer reviewers, including SSC members, participating in a peer review process established pursuant to MSA section 302(g)(1)(E) must meet the applicable OMB peer review standards as adopted in the revised NS2 guidelines. The revised NS2 guidelines are consistent with MSA section 302(g)(1)(D) which specifies that each SSC member shall be treated as an affected individual for the purposes of paragraphs (2), (3)(B), (4), and (5)(A) of MSA section 302(j). Further details on the conflicts of interest disclosure of SSC members as affected individuals are provided at 50 CFR 600.235. Regarding the comment that the SSC is the final arbiter in the peer review process, we agree that the SSC review is the final step in the overall scientific review process and the SSC should certify that its scientific recommendations for its Council are based on the BSIA. The revised NS2 guidelines do not restrict or impinge on the SSC's responsibilities to its Council.

*Comment 53:* Some commenters suggested that the SSC's role is advisory and should not invade the province of the Council decision making ability. They stated that the Council shall take into consideration the recommendations of the SSC, any public comment, and peer review findings in decision making.

*Response:* We agree that the role of the SSC is advisory and the revised NS2 guidelines in no way preclude any Council's consideration of public comments or other information when making decisions. However, the NS2 guidelines encourage all scientific information considered by the Council, including peer reviews, be brought to the Council through its SSC. We also note that pursuant to section 302(h)(6) of the MSA, a Council may not exceed fishing level recommendations of its SSC when establishing ACLs. See the NS1 guidelines (50 CFR 600.310) for further explanation.

*Comment 54:* Commenters suggested paragraph (b)(2)(iii) could be misinterpreted to indicate that federal and state fishery agency scientists could not serve as SSC members to review data or scientific materials prepared by their respective agencies. One commenter suggested amending the guidelines to prevent SSC members who are state or NMFS employees with unique scientific qualifications from being disqualified on conflict of interest

grounds. A commenter also asked for clarification on whether SSC members, including state or territorial officials, who advance an agenda at odds with Council decisions, should be screened for conflicts of interest.

*Response:* The guidelines provide that peer reviewers, including the SSC or SSC members who participate in peer review, must satisfy the peer review standards, and federal employees conducting peer review must comply with all applicable federal ethics requirements. The NS2 guidelines are clear regarding SSC participation in peer review and do not impose a blanket prohibition on employees from state or federal agencies, including NMFS, from participating in peer review. For clarity, we agree to remove, "reviewers should not be employed by the Council or entity that produced or utilizes the product for management decisions" in paragraph (b)(2)(iii). This also resolves the ambiguity of the word "entity," which was too vague. Additional details on the conflict of interest disclosure requirements for SSC members are provided at 50 CFR 600.235.

*Comment 55:* One commenter requested clarification of paragraph (c) by inserting "evaluation" in the title and first sentence to read: "Scientific evaluation and advice to Council" and: "Each scientific and statistical committee shall provide its Council ongoing scientific evaluation and advice for fishery management decisions."

*Response:* Paragraph (c) quotes MSA section 302(g)(1)(B) verbatim, therefore NMFS did not revise that language in the final guidelines. Moreover, NMFS believes that the SSC's role in evaluating scientific information is adequately addressed in paragraph (c)(1) which states: "Debate and evaluation of scientific information is the role of the SSC."

*Comment 56:* One commenter requested that the NS2 guidelines include guidance on the SSC process itself, because there is no oversight of the SSC and the SSC process is neither free of bias and conflict, nor amenable to alternative points of view. Other commenters requested the addition of language to address a perception of philosophical bias or advocacy by some SSC members.

*Response:* NMFS believes that the revised guidelines provide clear guidance on the peer review standards and the SSC's role as scientific advisors to its Council. Pursuant to MSA section 302(f)(6), Councils are required to make available to the public a Statement of Organization, Practices and Procedures (SOPP) in accordance with uniform standards prescribed by the Secretary of

Commerce. (See 16 U.S.C. 1852(f)(6).) The purpose of the SOPP is to inform the public how the Council (including the SSC and advisory panels) operates. (See 50 CFR 600.115.) The Council SOPP provides the best practices and operating procedures for the Council's SSC. Regarding alleged bias and conflict in the SSC process, MSA section 302(g)(1)(D) requires disclosure of SSC members' financial interests, and details on SSC member conflict of interest disclosure are provided at 50 CFR 600.235. Regarding openness of SSCs to alternative points of view, the SSC is comprised of experts from academic, non-governmental, and Federal and state government entities who provide expertise over a range of disciplines needed for informed fishery management decisions.

*Comment 57:* One commenter requested striking the statement: "the SSC must have a peer review of all of its recommendations" in the proposed guidelines.

*Response:* This statement does not exist in the proposed guidelines, nor do the guidelines require the SSC recommendations to be peer reviewed. Paragraph (c)(1) states that: "SSC scientific advice and recommendations to its Council are based on scientific information that the SSC determines to meet the guidelines for best scientific information available as described in paragraph (a) of this section."

*Comment 58:* One commenter suggested replacing "information" with "data" in the paragraph (c)(1) statement: "Such scientific advice should attempt to resolve conflicting scientific information, so that the Council will not need to engage in debate on technical merits."

*Response:* NMFS did not make the suggested change because the scientific information considered by the SSC is not always strictly data. For example, the SSC often evaluates scientific data, methods, results, and conclusions.

*Comment 59:* NMFS received several comments on the importance of transparency of the SSC when providing evaluation and advice to its Council; however, some expressed concern that meetings of the SSC were not publicly transparent. One commenter suggested that the NS2 guidelines should bar SSC meetings that are not public, including closed conference call meetings, and stated that some SSCs do not even meet concurrently with Council meetings, thereby preventing input from constituents. Another commenter suggested adding "must" to paragraph (c)(3) to read: "When the SSC as a body is conducting peer review, it should strive for consensus and must meet the

transparency guidelines for best scientific information available and peer reviews as described in paragraphs (a)(6)(iv) and (b)(3) of this section," because it is essential that the SSC, in the capacity of a peer reviewer, be transparent.

*Response:* The NS2 guidelines clearly state that review of scientific information by the SSC should be transparent and paragraph (c)(3) has been revised as requested. MSA section 302(i)(2) mandates that SSC meetings be open to the public and that timely notice be published in the Federal Register. SSC evaluations, findings, and recommendations are documented for Council meetings, which are also open to the public.

*Comment 60:* One commenter indicated that the SSC (or other Council advisory bodies), when conducting peer review, does not have to meet the high standards of the OMB peer review criteria. It was suggested that, in some instances, decisions on the use of updated stock assessment information have been made by the Councils and their SSCs without prior review by the established stock assessment review processes.

*Response:* NMFS agrees that the majority of work conducted by the SSC and other advisory bodies are not peer review processes, but rather advisory responsibilities, and the Council's SOPP provides guidance on best practices and operating procedures for the Council's SSC and other advisory bodies. Details on SSC member conflict of interest disclosure are provided at 50 CFR 600.235. Peer reviewers, including SSC members that participate in peer review, are required to satisfy the OMB peer review standards, where applicable. The NS2 guidelines also specify: "For peer review of some work products or scientific information, a greater degree of independence may be necessary to assure credibility of the peer review process." For example, an assessment update may not require the same degree of independence in the peer review process as would a benchmark assessment. NMFS notes that all stock assessment information undergoes some degree of peer review prior to the SSC evaluation for its Council.

*Comment 61:* A commenter recommended including a requirement for Council approval before any SSC member could be selected for an outside peer review, to mitigate the potential for any real or perceived conflicts of interest for SSC recommendations to its Council.

*Response:* We do not believe that the recommended revision is necessary. The NS2 guidelines clearly state:

"Participation of an SSC member in a peer review should not impair the ability of that SSC member to accomplish the advisory responsibilities to the Council."

*Comment 62:* One commenter suggested revising subsection (c)(2) to reflect that, to the extent possible, service on peer review panels should rotate between qualifying SSC members to strive for independence, balance and an absence of potential bias on review panels.

*Response:* NMFS believes that this recommendation is already adequately addressed in paragraph (b)(2)(iii) of the guidelines, which recommends rotating peer review responsibilities across an available pool of qualified reviewers.

*Comment 63:* Paragraph (b)(2) states: "The selection of participants in peer review must be based on expertise, independence, and a balance of viewpoints . . ." One commenter recommended removing the implication that the SSC is not itself "balanced" with respect to scientific perspectives. The commenter noted that the SSC includes scientists employed by the states, the Federal government, international commissions, and universities, and questioned whether the SSC members, for example government members, are to be considered as having some "perspective" that needs to be balanced with other perspectives and, therefore, whether additional SSC members must be appointed.

*Response:* NMFS believes that this is a misinterpretation of the guidelines because the guidelines do not provide any requirements on the selection of SSC as an advisory body to its Council and do not imply that the SSC body is not itself balanced. Paragraph (b)(2) adopts the criteria from the OMB Peer Review Bulletin requiring that the selection of peer reviewers, including SSC members that participate in peer review, be based on expertise, independence, balance of viewpoints, and be free of conflicts of interest.

*Comment 64:* Commenters requested removing the phrase "conducts or" from the statement in paragraph (c)(3): "If an SSC as a body, or individual members of an SSC, conducts or participates in a peer review, those SSC members must meet the peer reviewer selection criteria."

*Response:* NMFS revised the statement to read: "If an SSC as a body conducts a peer review established under [MSA] section 302(g)(1)(E) or individual members of an SSC participate in such a peer review, the SSC members must meet the peer reviewer selection criteria as described



in paragraph (b)(2) of this section.” See the response to Comment 52 for additional detail.

**Comment 65:** One commenter recommended that NMFS and the Councils establish terms of reference requiring SSC members to serve as chairs or facilitators in peer review, a role in which they may serve without having to meet strict qualifying criteria for peer reviewers.

**Response:** NMFS agrees that it may be beneficial to the Council to have an SSC member serve as a chair during a peer review. The revised NS2 guidelines allow for this and NMFS does not believe additional language is necessary because the Secretary and each Council have the discretion to establish the peer review process, including who should serve as the chair of the review. Paragraph (c)(2) clearly states: “An SSC member may participate in peer review when such participation is beneficial to the peer review due to the expertise and institutional memory of that member, or beneficial to the Council’s advisory body by allowing that member to make a more informed evaluation of the scientific information.”

**Comment 66:** One commenter requested that paragraph (c)(3) clearly distinguish regular peer review activities of the SSC from official peer reviews which require SSC members participating in the review to meet the peer reviewer standards in paragraph (b)(2).

**Response:** NMFS agrees and clarified in paragraph (c)(3) that SSC members must meet the peer reviewer selection criteria contained in paragraph (b)(2) when they participate in a peer review established pursuant to MSA section 302(g)(1)(E). See the responses to Comments 52 and 60 for additional detail.

**Comment 67:** Several commenters expressed support for paragraph (c)(5), which requires that SSC disagreements with peer review findings be documented in a report and made available to their Council and the public. Some commenters requested stronger language to prevent the SSC from freely rejecting the results of any peer review. Other commenters suggested that the scientific advice of the SSC should attempt to resolve conflicting scientific information, and the analysis of conflicts should be reported so that the Council will not be forced to engage in debate on technical merits. The SSC should reconcile the differences between its findings and that of the peer review. One commenter requested an additional 45–60 day period for public review of the peer review report and SSC findings when an

SSC reports disagreements with the findings and conclusions of a peer review. Another commenter supports the idea that the SSC should report its decisions that are inconsistent with a peer review finding, but expressed concern that paragraph (c)(5) implies that a peer review panel is an independent policy and review body with standing equal to that of the SSC or Council.

**Response:** Paragraph (c)(1) provides appropriate guidance that the SSC’s scientific advice should attempt to resolve conflicting scientific information. Further, paragraph (c)(5) provides that when the SSC disagrees with peer review results, a report must be prepared outlining the areas of disagreement, and the rationale and information used by the SSC for making its determination. Paragraph (c)(5) does not state or imply that a peer review panel has equal standing to that of the SSC and Council; rather, the intent is to ensure transparency in the SSC evaluation of scientific information that is inconsistent with the findings or conclusions of a peer review. NMFS disagrees with the request to require an additional 45–60 day period for public review when the SSC reports disagreements with the findings and conclusions of a peer review because it would significantly delay final Council action on fishery management measures.

**Comment 68:** One commenter requested that the NS2 guidelines require any additional assessment work requested by the SSC be subject to peer review. The commenter explained that SSCs in some regions have extended stock assessments by requiring additional model runs, which are then incorporated into scientific advice to the Council without further peer review.

**Response:** NMFS does not agree that the NS2 guidelines should in all cases require peer review of additional work requested by the SSC. When the SSC requests additional work, it should be for the purpose of clarification in the context of a main body of work that has already been reviewed. The need for peer review of additional work will depend upon the novelty, complexity, and potential for controversy. The peer review system can involve existing committees, so it may be acceptable for the SSC to act as reviewers for the added work if any review is needed. It is important that this additional work be documented in the SAFE report or elsewhere so that it becomes part of the public record for fishery management actions.

**Comment 69:** One commenter expressed concern with language in paragraph (c)(4) that states that the SSC

should, “not repeat the previously conducted and detailed technical peer review,” on the basis this implies that SSC input is not warranted if a peer review is conducted. The commenter recommended adding, “but this provision is not intended to thwart or constrain the scope or depth of SSC comments.”

**Response:** Paragraph (c)(4) is not intended to constrain the advisory role of the SSC to its Council, but seeks to ensure that a technical peer review is not repeated. A primary role and necessary function of the SSC is to evaluate and provide recommendations on scientific information for its Council, including recommendations on whether the scientific information is adequate or requires further work if deemed inadequate.

**Comment 70:** Some commenters requested clarification of the roles of the SSC and Council regarding establishment of ABCs and ACLs. One commenter stated that the NS2 guidelines should include a definitive statement that SSCs provide science-based ABCs and Councils set ACLs. Some commenters requested revising the language in paragraph (c)(6) to: “Annual catch limits (ACLs) may exceed the SSC’s recommendations for fishing levels.” Other commenters stated that, once the SSC has set the ABC, the options of the Councils are extremely limited. The NS2 guidelines should clarify that the Councils must have the power and ability to determine the proper limits and regulations based on the recommendations of the SSCs.

**Response:** The NS1 guidelines provide detailed guidance on compliance with the ACL requirements and clarify the relationship between ACLs, ABC, maximum sustainable yield (MSY), optimum yield (OY) and other applicable reference points. (See generally 50 CFR 600.310.) Those issues are not addressed in the NS2 guidelines. NMFS will not make the suggested revisions to the language in paragraph (c)(6) because doing so would be inconsistent with MSA section 302(h)(6) which states that: “Each Council shall . . . develop annual catch limits for each of its managed fisheries that may not exceed the fishing level recommendations of its scientific and statistical committee or the peer review process established under subsection (g).”

#### SAFE Report

**Comment 71:** One commenter requested that the guidelines specify that the SAFE report be a single document, or alternatively provide that the SAFE documents be available in one

place on a Council or NMFS Web site with an index and links to pertinent documents. Most commenters agreed with the SAFE report being a "document or set of documents" and with the new language in paragraph (d)(5)(ii) that the SAFE report: "must be made available by the Council or NMFS on a readily accessible Web site." Two commenters recommended retaining the current NS2 guidelines language: "Each SAFE report must be scientifically based, and cite data sources and interpretations" and recommended that the Secretary ensure disclosure of the source of any information included in the SAFE report.

*Response:* While NMFS understands that a single document has certain advantages of convenience to the users, NMFS decided that it is more beneficial to provide the Councils and the Secretary the discretion to choose whether to compile the SAFE report as a single document or set of documents. In response to comments on the proposed guidelines, NMFS has added language in paragraph (d) stating that: "Each SAFE report must be scientifically based, with appropriate citations of data sources and information." NMFS adds further clarification in paragraph (d)(5)(i): "Sources of information in the SAFE report should be referenced unless the information is proprietary."

*Comment 72:* One commenter requested adding "and the Secretary" to the first sentence of paragraph (d) to indicate that the SAFE report is for both the Secretary and Council. Some commenters suggested that the NS2 guidelines should explicitly delegate to NMFS or the Councils the accountability for preparing the SAFE report with support from others as needed.

*Response:* Paragraph (d) was revised to state that the SAFE report: "provides the Secretary and Councils with a summary of scientific information . . ." The NS2 guidelines explicitly designate responsibility in paragraph (d)(1): "The Secretary has the responsibility to ensure that SAFE reports are prepared and updated or supplemented as necessary . . ." while also providing that: "The Secretary or Councils may utilize any combination of personnel from Council, State, Federal, university, or other sources to acquire and analyze data and product the SAFE report." The intent is to allow flexibility between the Secretary and Councils in utilizing their resources to compile the SAFE report.

*Comment 73:* One commenter objected to the language in paragraph (d) because it appears to give NMFS the responsibility to prepare the SAFE

report, making NMFS the final arbiter of what constitutes BSIA for the Councils. It also appears to require that the SAFE report be peer reviewed before it can be considered by a Council, which usurps the SSC's role of providing scientific advice to the Council. Another commenter requested that each SAFE report, particularly new information, be peer reviewed and that all sources used to compile the SAFE reports should be free of conflicts of interest.

*Response:* As reflected in paragraph (d), the Secretary of Commerce ultimately has the responsibility under the MSA to determine whether a proposed management action is based on BSIA, because all fishery management actions must be determined to be consistent with all of the MSA national standards, including NS2, as well as other applicable law. While it is expected that the advice provided by SSCs will be based on BSIA, that information, as well as how it is applied, is still subject to Secretarial review and approval before it can be implemented. There is no language in paragraph (d) that implies that the Secretary's responsibility in regard to the SAFE report undermines the role of the SSC. Peer review of scientific information, including information contained in SAFE reports, and conflict of interest concerns are sufficiently addressed in the peer review section of these revised guidelines. The guidelines are clear that the SAFE report is a compilation of the BSIA products, some of which may have been peer reviewed, to be used by the Secretary, Councils, and the public in developing and reviewing fishery management actions. The SAFE report is an important and useful summary of scientific information for evaluation and recommendations by the SSC for its Council.

*Comment 74:* One commenter recommended that the NS2 guidelines specify a standard format for SAFE reports, similar to a format of the North Pacific groundfish SAFE reports where individual stock assessments are summarized in an executive summary including relevant information, such as biological reference points and stock status, as well as recommendations for OFLs and ABCs, and the concerns addressed in these recommendations.

*Response:* NMFS considered requiring a common format for SAFE reports, but recognized that there are significant differences in how the eight Councils and the Secretary conduct their business, including their management schedules, the committees and technical groups involved, how and when they receive scientific information, and the

format in which that information is received. In consideration of those differences and the need to make the SAFE report preparation efficient, NMFS believes that allowing flexibility in the format of the SAFE documents is preferable to requiring a single uniform format.

*Comment 75:* One commenter requested that the SAFE report include information on safety at sea, as specified in the National Standard 10 guidelines.

*Response:* Paragraph (d)(2) of the revised NS2 guidelines states that SAFE reports provide "information on bycatch and safety for each fishery."

*Comment 76:* Commenters indicated that some regions have not routinely prepared SAFE reports, and requested the SAFE report be updated regularly, on at least an annual basis to ensure consistency with any and all management decisions.

*Response:* NMFS believes paragraph (d)(1) is sufficiently clear that: "The SAFE report and any comments or reports from the SSC must be available to the Secretary and Council for making management decisions for each FMP" and also states: "The Secretary has the responsibility to ensure that SAFE reports are prepared and updated or supplemented as necessary whenever new information is available to inform management decisions. . . ." NMFS disagrees with the recommendation that the SAFE report be updated on at least an annual basis because, in some cases, Council processes may allow for multiyear harvest specifications. NMFS believes allowing the SAFE reports to be prepared periodically is appropriate and consistent with the decision-making schedule to allow for efficiencies and differences in the processes used by different Councils for different fisheries.

*Comment 77:* One commenter recommended that the text in paragraph (d)(2), ". . . assessing the relative success of existing state and Federal fishery management programs" be revised to ". . . assessing the relative success of existing relevant state and Federal fishery management plans."

*Response:* NMFS agrees to insert the word "relevant." The word "programs" was not changed to "plans" as recommended because not all states have FMPs.

*Comment 78:* One commenter requested inserting in paragraph (d)(3): "To the extent possible . . ." at the start of "each SAFE report should contain the following" because items to be included in a SAFE report cannot always be calculated for all stocks (e.g., minimum stock size threshold cannot be calculated for data-poor stocks with incomplete catch records).

*Response:* NMFS agrees with the commenter's concern and revised paragraph (d)(3) as: "Each SAFE report should contain the following scientific information when it exists." NMFS also added to paragraph (d)(2): "The SAFE report should contain an explanation of information gaps and highlight needs for future scientific work."

*Comment 79:* One commenter requested that the NS2 guidelines require that uncertainty be specified in the SAFE report because the ABC will be set based, in part, on scientific uncertainty. The commenter also requested the guidelines require that the SAFE report include management uncertainty information and relevant recommendations for the Council's consideration in establishing ACLs.

*Response:* NMFS agrees with the suggestion to include consideration of scientific uncertainty in the SAFE report, and revises the language in paragraph (d)(3)(i)(B) to read "(B) Information on OFL and ABC, preventing overfishing, and achieving rebuilding targets. Documentation of the data collection, estimation methods, and consideration of uncertainty in formulating catch specification recommendations should be included (§ 600.310(f)(2))." The SSC takes into account scientific uncertainty in setting ABC control rules, and the SSC report to the Council should document how the SSC did so.

*Comment 80:* One commenter requested that the NS2 guidelines require the SAFE report to include definitions for "overfishing" and "overfished" from the NMFS 1998 National Standard 1 Guidelines. Another commenter stated that SAFE reports should include the SSC recommendations for ABC, and must contain the maximum fishing mortality threshold (MFMT), the minimum stock size threshold (MSST), overfishing and overfished status, and rebuilding plans if applicable. Another commenter suggested that the SAFE report contain assessment team recommendations for OFLs and ABCs, including any concerns that went into their recommendations and this information should then be evaluated by the SSC for their Council's catch specification process. Another commenter expressed concern with the requirement that the SAFE report include recommendations and reports of the SSC regarding overfishing levels and ABCs because the SAFE report is published before the SSC evaluation. The SAFE report is reviewed by the SSC as it provides its advice to the Council, and its recommendations occur after the publication of the SAFE report. Therefore, the SSC should publish a

report of its deliberations and make it publicly available on the Council's Web site as part of the official record supporting the Council's recommendations to the Secretary.

*Response:* NMFS disagrees with the suggestion to require definitions for "overfishing" and "overfished" in the SAFE report because those terms are already defined in the NS1 guidelines. We believe the information on which to base catch specifications and status determinations should be available to the Councils at the time of their decision making process, and therefore, language is added to paragraph (d)(3)(i) that the SAFE report should contain: "Information on which to base catch specifications and status determinations, including the most recent stock assessment documents and associated peer review reports, and recommendations and reports from the Council's SSC." Regarding the comment on the requirement that the SAFE report include SSC reports on overfishing levels and ABCs, NMFS believes this concern is adequately addressed in the NS2 guidelines because the SAFE report can be a document or set of documents, including the report of the SSC findings and recommendations, that are publicly available. The final recommendations and actions of the SSC may be included in an amendment to the SAFE report.

*Comment 81:* Two commenters expressed concern with the text in paragraph (d)(3): "Each SAFE report should contain . . . (i)(B) Any management measures necessary to rebuild an overfished stock or stock complex . . ." The SAFE report should report progress towards stock rebuilding, but rebuilding plans, including analysis of management alternatives, should be developed through the Council's FMP process with input from advisors and the public.

*Response:* The revised NS2 guidelines specify that the SAFE report should contain the scientific information needed in support of management measures or rebuilding plan, and the intent was not to include the actual management measures or the full analyses of the alternatives. MSA section 303 requires FMPs and FMP amendments to contain conservation and management measures for fisheries. To clarify this, NMFS has deleted "along with information to determine" from paragraph (d)(3)(i)(A), so it now reads: "A description of the SDC (e.g., maximum fishing mortality rate threshold and minimum stock size threshold for each stock or stock complex in the fishery)." NMFS also revised paragraph (d)(3)(i)(B) to read: "The best scientific information

available to determine whether overfishing is occurring with respect to any stock or stock complex, whether any stock or stock complex is overfished. . . ." Paragraph (d)(3)(i)(C) was revised to read: "The best scientific information available in support of management measures necessary to rebuild an overfished stock or stock complex (if any) in the fishery to a level consistent with producing the MSY in that fishery." These changes make clear that the purpose of the SAFE report is to provide the Councils and Secretary with the necessary BSIA to understand the status of the fishery and support their efforts in evaluating management measures and alternatives.

*Comment 82:* One commenter urged that paragraph (d)(3)(iii) incorporate the Standardized Bycatch Reporting Methodology (SBRM) required by MSA section 303(a)(11), 16 U.S.C. 1853(a)(11), into the SAFE report. The SAFE report also should include information on catch and bycatch, a description of pertinent data collection and estimation methods, and "quantitative estimates" of total mortality.

*Response:* Paragraph (d)(3)(ii) of the revised NS2 guidelines states that the SAFE report should include: "Information on sources of fishing mortality (both landed and discarded), including commercial and recreational catch and bycatch in other fisheries and a description of data collection and estimation methods used to quantify total catch mortality, as required by the National Standard 1 Guidelines." The NS2 guidelines do not preclude including discard and total mortality estimates into the SAFE report when available. NMFS believes it is inappropriate to require SAFE reports to contain SBRM, as MSA section 303(a)(11) requires that SBRM be established in an FMP.

*Comment 83:* Two commenters expressed concern that paragraph (d)(3)(v) could be misinterpreted as requiring the relevant evaluations of EFH information to be in the SAFE report. EFH information should be evaluated through Plan Teams, SSC and Council meetings. The frequency of review and revision of EFH components of FMPs is already provided for in 50 CFR 600.815(a)(10), therefore it would be confusing to require additional EFH review as part of the SAFE report. Another commenter indicated that this confusion can be resolved with minor clarification that EFH information may be included by reference and contained in a stand-alone separate document, not just physically merged into the SAFE report.

*Response:* The NS2 guidelines ensure that a summary of BSIA is available in the SAFE report, including any relevant EFH information. The intent is not to require an additional evaluation of EFH. Therefore, NMFS has deleted "review and evaluations" and "stand-alone chapter" from paragraph (d)(3)(iv) so it now reads: "Information on EFH to be included in accordance with the EFH provisions (§ 600.815(a)(10))."

*Comment 84:* One commenter requested language requiring more thorough assessments of marine ecosystems in SAFE reports. Two commenters supported the inclusion of: "Pertinent economic, social, community, and ecological information" in paragraph (d)(3)(vi) and one suggested additional language that explicitly includes ecosystem considerations, such as forage fish impacts and other criteria to determine optimum yield.

*Response:* NMFS believes that the NS2 guidelines include sufficient language on the scientific information to be included in the SAFE report, including marine ecosystem information. The SAFE report is a summary of existing information, not only on stock status, but on many ecosystem components as well. The language is intended to be broad enough to include all the important considerations in ecological information, including forage fish impacts where relevant.

#### FMPs

*Comment 85:* One commenter requested insertion of the language: "BSIA is needed for regulatory amendments in conjunction with a framework FMP, and not just FMPs."

*Response:* The proposed edit is not necessary because the MSA national standards apply to all Council actions, not just FMPs.

*Comment 86:* One commenter requested adding: "If information indicates that drastic changes have occurred in the fishery that require revision of the management objectives or measures, then the FMP process must begin again."

*Response:* This is beyond the scope of the guidelines and is unnecessary. Councils have the statutory responsibility for preparing FMPs and amendments to such plans and revising them as appropriate according to sections 302(h) and other provisions of the MSA.

*Comment 87:* One commenter asserted that the preparation and implementation of an FMP should be delayed until the best scientific data

possible concerning a fishery is complete.

*Response:* NMFS disagrees and provides in paragraph (e)(2): "The fact that scientific information concerning a fishery is incomplete does not prevent the preparation and implementation of an FMP." This is consistent with the NS2 requirement that fishery conservation and management measures be based on the BSIA.

*Comment 88:* One commenter stated the NS2 guidelines should apply equally to Highly Migratory Species (HMS) managed by NMFS and Council-managed species. The commenter also requested that the guidelines address how scientific advice for HMS is provided to NMFS.

*Response:* The NS2 guidelines apply to scientific information used by the Councils and NMFS. Scientific information used by NMFS to manage Atlantic HMS undergoes a rigorous and transparent peer review process. No additional HMS-specific provisions are needed in the guidelines.

*Comment 89:* One commenter suggested that clarification is needed in paragraph (e)(3): "Information about harvest within state waters, 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 commenter recommended that the NS2 guidelines specify FMP information requirements that may be imposed on fisherman and processors.

*Response:* Information to be collected from fishermen and processors must be identified in FMPs per MSA section 303(a)(5). Thus NMFS has not revised the NS2 guidelines to require specification of this information. However, NMFS has added a new sentence in paragraph (e)(3) that clarifies: "Scientific information collections for stocks managed cooperatively by Federal and State governments should be coordinated with the appropriate state jurisdictions, to the extent practicable, to ensure harvest information is available for the management of stocks that utilize habitats in state and federal managed waters."

*Comment 90:* Four commenters requested that the words "should" or "must" be replaced with the word "shall" through many sections to strengthen the requirements of NS2. Conversely, two commenters noted that MSA section 301(b) provides that the National Standards guidelines are advisory in nature and do not have the force and effect of law, and therefore recommended that NMFS strike all use of the words "must" and "shall" in the NS2 guidelines.

*Response:* In the NS2 guidelines, "shall" is used only when quoting statutory language directly. "Must" is used instead of "shall" to denote an obligation to act and is primarily used when referring to requirements of the MSA, 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 MSA, and is a factor reviewers will look for in evaluating a SOPP or FMP. "May" is used in a permissive sense. NMFS notes that the above word usage in the National Standards guidelines is explained at 50 CFR 600.305(c).

#### V. Changes From Proposed Action (74 FR 65724, Dec. 11, 2009)

Paragraph (a)(1) was revised to clarify that "environmental" scientific information is also important for fishery conservation and management. This introductory paragraph was revised to clarify that successful fishery management not only depends on evaluation of "potential" impact that conservation and management measures will have on living marine resources, but also depends on "(ii) Identifying areas where additional management measures are needed."

Paragraph (a)(2) was revised by striking the last sentence because similar language is provided in paragraph (a)(6)(v).

Paragraph (a)(3) was revised to expand the term "data-poor fisheries" to "Information-limited fisheries, commonly referred to as 'data-poor' fisheries."

Paragraph (a)(4) was revised by adding: "Scientific information includes established and emergent scientific information. Established science is scientific knowledge derived and verified through a standard scientific process that tends to be agreed upon often without controversy. Emergent science is relatively new knowledge that is still evolving and being verified, therefore, may potentially be uncertain and controversial. Emergent science should be considered more thoroughly, and scientists should be attentive to effective communication of emerging science." Editorial clarification was also included in the revised language: "Scientific information includes data compiled directly from surveys or sampling programs, and models that are mathematical representations of reality constructed with primary data."

Paragraph (a)(5) provides a description of science as a dynamic process, and the word "ideally" was added to the statement that: "Best scientific information is, therefore, not

static and ideally entails developing and following a research plan with the following elements” because the ability to achieve all the listed elements is not always possible.

Paragraph (a)(6) was revised to replace “Principles” with “Criteria to consider” to read as: “Criteria to consider when evaluating best scientific information are . . .”

Paragraph (a)(6)(i) was revised to clarify that analysis of related stocks or species for inferring the likely traits of stocks “may be a useful tool” rather than the previously stated “is a powerful tool.”

Paragraph (a)(6)(ii)(B) was revised to clarify “Alternative points of view” as “Alternative scientific points of view.”

Paragraph (a)(6)(ii)(C) was revised to remove “reconcile” and the ambiguity associated with the previous statement: “effort should be made to reconcile scientific information with local and traditional knowledge.” The language now reads: “Relevant local and traditional knowledge (e.g., fishermen’s empirical knowledge about the behavior and distribution of fish stocks) should be obtained, where appropriate, and considered when evaluating the BSIA.”

Paragraph (a)(6)(iii) was revised by striking the first sentence of the paragraph and revising the second sentence from: “The objectivity standards should ensure that information is accurate, reliable, and unbiased, and that information products are presented in an accurate, clear, complete, and balanced manner” to read: “Scientific information should be accurate, with a known degree of precision, without addressable bias, and presented in an accurate, clear, complete and balanced manner.” We also included the statement: “Scientific processes should be free of undue nonscientific influences and considerations” as recommended by the NRC (2004).

In paragraph (a)(6)(iv), the statement: “Subject to the Magnuson-Stevens Act confidentiality requirements, the public should have access to each stage in the development of scientific information, from data collection, to analytical modeling, to decision making” was removed because it is impracticable to solicit public comment during all the stages of development of the science, such as data sampling operations and analytical work. Further revision was made to clarify public comment should be solicited during the “review” of scientific information rather than during the “development” of science.

Paragraph (a)(6)(v) on timeliness was revised by moving paragraph (a)(6)(v)(B) to the beginning of paragraph (a)(6)(v),

and then relabeling paragraph (C) as (B). The last sentence from (B) was moved to be the first sentence in (a)(6)(v), and this phrase: “Management decisions should not be delayed due to data limitations . . .” was revised to:

“Mandatory management actions should not be delayed due to limitations in scientific information . . .”

In paragraph (a)(6)(v), the statement: “Sufficient time should be allotted to analyze recently acquired data to ensure its reliability and that it has been audited” was modified for clarification to: “Sufficient time should be allotted to audit and analyze recently acquired information to ensure its reliability.” Further clarification is provided by revising: “Data collection methods are expected to be subjected to appropriate review before used to inform management decisions” to: “Data collection methods are expected to be subjected to appropriate review before providing data used to inform management decisions.” The text of proposed paragraph (a)(6)(v)(B) was revised by changing: “Timeliness may also mean that in some cases results of important studies or monitoring programs must be brought forward” to: “In some cases, due to time constraints, results of important studies or monitoring programs may be considered for use before they are fully completed.”

Paragraph (a)(6)(v)(A) was revised by changing: “For those data that require being updated” to: “For information that needs to be updated. . .” The words “In particular,” were removed. The words “such timing concerns” were added to language that now reads: “subject to regulatory constraints, and such timing concerns should be explicitly considered. . .” Further clarification was added with: “Data collection is a continuous process, therefore analysis of scientific information should specify a clear time point beyond which new information would not be considered in that analysis and would be reserved for use in subsequent analytical updates.”

Paragraph (a)(6)(v)(C) was merged with paragraph (B), and revised for clarity by changing “species’ life history characteristics might not change” to “some species’ life history characteristics might not change.” Another revision changed: “Other time-series data (e.g., abundance, catch statistics, market and trade trends) provide context for changes in fish populations, fishery participation, and effort used, and therefore provide valuable information to inform current management decisions” to read: “Other historical data (e.g., abundance, environmental, catch statistics, market

and trade trends) provide time-series information on changes in fish populations, fishery participation, and fishing effort that may inform current management decisions.”

Paragraph (a)(6)(vi)(B) was revised to clarify the list of validation measures by changing: “the precision of the estimates is adequate, model estimates are unbiased, and the estimates are robust to model assumptions” to: “the accuracy and precision of the estimates is adequate, and the estimates are robust to model assumptions.” The phrase “and to correct for known bias to achieve accuracy” was added to the statement: “models should be tested using simulated data from a population with known properties to evaluate how well the models estimate those characteristics.”

In paragraph (a)(6)(vii) a new sentence was added for additional clarity: “Routine updates based on previously reviewed methods require less review than novel methods or data.” We also provided clarification by revising: “substantial fishery management alternatives considered by a Council” to: “The scientific information that supports conservation and management measures considered by the Secretary or a Council should be peer reviewed, as appropriate.”

Paragraphs (a)(6)(vii) and (viii) were combined into a single paragraph. A new sentence was added to the end of the paragraph: “Other applicable guidance on peer review can be found in the Office of Management and Budget Final Information Quality Bulletin for Peer Review.”

Paragraph (b)(1) was revised by removing “for each Council” from the phrase: “The process established by the Secretary and Council for each Council . . .”

The first sentence of paragraph (b)(1)(ii) was revised by moving “to the extent practicable” from the end of the sentence to read: “The peer review should, to the extent practicable, be conducted early . . .” and adding: “so peer review reports are available for the SSC to consider in its evaluation of scientific information for its Council and the Secretary” to the end of the sentence.

Paragraph (b)(1)(iii) was revised by changing: “The scope of work contains the objective of the specific advice being sought” to: “The scope of work contains the objectives of the peer review, evaluation of the various stages of the science, and specific recommendations for improvement of the science.” The language: “as well as to make recommendations regarding areas of missing information, future research,



data collection, and improvements in methodologies" was added to the third sentence of the paragraph. Further clarification was made by revising: "The scope of work may not request reviewers to provide advice on scientific policy (e.g., amount of uncertainty that is acceptable or amount of precaution used in an analysis)" to: "The scope of work may not request reviewers to provide advice on policy or regulatory issues (e.g., amount of precaution used in decision-making) which are within the purview of the Secretary and the Councils, or to make formal fishing level recommendations which are within the purview of the SSC."

Paragraph (b)(2) on peer review selection was revised by changing a "must" to a "should."

Paragraph (b)(2)(i) was revised by deleting "including a balance in perspectives" from the first sentence and adding "should reflect a balance in perspectives, to the extent possible" to the second sentence.

Paragraph (b)(2)(ii) was revised by deleting the second sentence and replacing it with the last sentence of this section which was revised to: "Potential reviewers who are not federal employees must be screened for conflicts of interest in accordance with the NOAA Policy on Conflicts of Interest for Peer Review Subject to OMB's Peer Review Bulletin or other applicable rules or guidelines. "Under the NOAA policy" was added to the beginning of the third sentence and: "Peer reviewers must not have any real or perceived conflicts of interest" was changed to: "peer reviewers must not have any conflicts of interest . . ."

Paragraph (b)(2)(ii)(C) was merged with paragraph (b)(2)(ii)(B). The language: "Except for those situations in which a conflict of interest is unavoidable, and the conflict is promptly and publicly disclosed" was revised to: "For reviews requiring highly specialized expertise, the limited availability of qualified reviewers might result in an exception when a conflict of interest is unavoidable; in this situation, the conflict must be promptly and publicly disclosed." The last sentence of the paragraph was modified and moved to paragraph (b)(2)(ii) as noted above.

Paragraph (b)(2)(iii) addressing independence in peer review was clarified by revising: "Peer reviewers must not have participated in the development of the work product or scientific information under review" to: "Peer reviewers must not have contributed or participated in the development of the work product or scientific information under review."

The language: "For peer review of some work products or scientific information, a greater degree of independence may be necessary to assure credibility of the peer review process" was revised for clarity to: "For peer review of products of higher novelty or controversy, a greater degree of independence is necessary to ensure credibility of the peer review process." The language: "Peer review responsibilities should rotate across the available pool of qualified reviewers or among the members on a standing peer review panel, recognizing that, in some cases, repeated service by the same reviewer may be needed because expertise" was revised for clarity to: "Peer reviewer responsibilities should rotate across the available pool of qualified reviewers or among the members on a standing peer review panel to prevent a peer reviewer from repeatedly reviewing that same scientific information, recognizing that, in some cases, repeated service by the same reviewer may be needed because of limited availability of specialized expertise."

Paragraph (b)(3) on transparency in peer review was revised from: "A transparent process is one that allows the public full and open access to peer review panel meetings, background documents, and reports, subject to Magnuson-Stevens Act confidentiality requirements" to: "A transparent process is one that ensures that background documents and reports from peer review are publicly available, subject to Magnuson-Stevens Act confidentiality requirements, and allows the public full and open access to peer review panel meetings." The text: "also be publicly transparent in accordance with the Council's requirements for notifying the public meetings. The date, time, location, and terms of reference (scope and objectives)" was replaced with: "be conducted in accordance with meeting procedures at § 600.135." The time period for public notice of a peer review panel meeting was revised by changing the language to: "Consistent with that section, public notice of peer review panel meetings should be announced in the *Federal Register* with a minimum of 14 days and with an aim of 21 days before the review. . . ." The words "prior to review" were removed from the statement: "Names and organizational affiliations of reviewers also should be publicly available."

Paragraph (c)(1) on SSC advice to its Council was revised from: "SSC scientific advice and recommendations to the Councils based on review and evaluation of scientific information must meet the guidelines of best scientific information available" to:

"SSC scientific advice and recommendations to its Council are based on scientific information that the SSC determines to meet the guidelines for best scientific information available." In the sentence: "SSCs may conduct peer reviews, participate in peer reviews, or evaluate peer reviews to . . .", the words "participate in peer reviews" were struck because participation in peer review by SSC members is addressed in the paragraph (c)(2). The language: ". . . so that the Council will not be forced to engage in debate on technical merits. Debate and evaluation of scientific information should be part of the role of the SSC" was changed to: ". . . so that the Council will not need to engage in debate on technical merits. Debate and evaluation of scientific information is the role of the SSC."

The last sentence of paragraph (c)(2) was changed from: "Participation of an SSC member in a peer review should not impair the ability of that SSC member to accomplish the advisory responsibilities to the Council" to: "Participation of an SSC member in a peer review should not impair the ability of that member to fulfill his or her responsibilities to the SSC."

The first sentence of paragraph (c)(3) was revised from: "If an SSC as a body, or individual members of an SSC, conducts or participates in a peer review, those SSC members must meet the peer reviewer selection criteria as described in paragraph (b)(2) of this section" to: "If an SSC as a body conducts a peer review established under Magnuson-Stevens Act section 302(g)(1)(E) or individual members of an SSC participate in such a peer review, the SSC members must meet the peer reviewer selection criteria as described in paragraph (b)(2) of this section." The second sentence was changed from: "These guidelines require separate consideration from those of § 600.235 . . ." to: "In addition, the financial disclosure requirements under § 600.235 . . . apply." When the SSC body is conducting peer review, the word "must" was added to "meet the transparency guidelines."

In paragraph (c)(4), the statement "SSCs must maintain their role as advisors to the Council about scientific information that comes from an external peer review process" was changed by removing "external" because this statement applies to all peer review rather than only external peer review. The phrase "be linked to" in the first sentence was changed to "consider" and the word "review" was changed to "consider" in the last sentence of the paragraph for clarification.

In the first sentence of paragraph (c)(5), the phrase: "If the evaluation of scientific information by the SSC is inconsistent with" was changed to: "If an SSC disagrees with" and the word "should" was changed to "must" to strengthen the need for the SSC to prepare a report outlining disagreement with peer review findings, and NMFS added: "This report must be made publicly available" to the end of the paragraph.

Paragraph (c)(6) was revised by specifying that ACLs are "developed by a Council." The term "SSC recommendation" was clarified to "SSC fishing level recommendations." "Per the National Standard 1 Guidelines," was added to the beginning of the second sentence. Further clarification was provided by adding: "The SSC is expected to take scientific uncertainty into account when making its ABC recommendation (§ 600.310(f)(4)). The ABC recommendation may be based upon input and recommendations from the peer review process."

Paragraph (d) was revised to clarify that the SAFE report provides scientific information for "the Secretary and the Councils" rather than to only the Councils. The language: "Each SAFE report must be scientifically based with appropriate citations of data sources and information" was also added to this paragraph.

Paragraph (d)(1) was revised for clarification to state that the SAFE report is prepared and updated or supplemented as necessary whenever new information is available: "to inform management decisions such as status determination criteria (SDC), overfishing level (OFL), optimum yield, or ABC values." It previously read: "that requires a revision to the status determination criteria (SDC), or is likely to affect the overfishing level (OFL), optimum yield, or ABC values." Clarification was also made that the SAFE report must be available to "the Secretary and Council" rather than to only the Council.

Paragraph (d)(2) was revised by adding: "The SAFE report should contain an explanation of information gaps and highlight needs for future scientific work. Information on bycatch and safety for each fishery should also be summarized." The word "relevant" was also added to "state and Federal fishery management programs" for further clarification.

The introductory paragraph (d)(3) for the SAFE report information was revised for clarification by adding "scientific information when it exists" to "Each SAFE report should contain the following."

The subsections within paragraph (d)(3) were reordered and renumbered for clarification purposes.

The language in paragraph (d)(3)(i) was moved to paragraph (d)(3)(i)(A), and revised to clarify by removing "along with information to determine."

The language from paragraph (d)(3)(i)(A) was moved to paragraph (d)(3)(i)(B) and revised to clarify by adding: "The best scientific information available to determine."

Paragraph (d)(3)(i)(B) was renumbered as paragraph (d)(3)(i)(C) and revised to clarify by adding: "The best scientific information in support of" and removing the word "any."

In paragraph (d)(3)(ii), the language: "Information on which to base catch specifications and status determinations, including the most recent stock assessment documents and associated peer review reports, and recommendations and reports from the Council's SSC" was moved to paragraph (d)(3)(i) as an introductory sentence to paragraph (d). The remaining language: "on OFL and ABC, preventing overfishing, and achieving rebuilding targets" and: "Documentation of the data collection, estimation methods, and consideration of uncertainty in formulating catch specification recommendations should be included" was moved to paragraph (d)(3)(i)(B). The word "Information" was added before the phrase "on OFL and ABC, preventing overfishing."

Paragraph (d)(3)(iii) was renumbered as paragraph (d)(3)(ii).

Paragraph (d)(3)(iv) was renumbered as paragraph (d)(3)(iii).

Paragraph (d)(3)(v) was renumbered as paragraph (d)(3)(iv), and revised by changing: "Review and evaluation of EFH information in accordance with the EFH provisions (§ 600.815(a)(10))" to: "Information on EFH to be included in accordance with the EFH provisions (§ 600.815(a)(10)). The language "as a standalone chapter in a clearly noted section" was removed because the EFH report tends to be a lengthy document that is included in the SAFE report that is comprised of a set of documents.

Paragraph (d)(3)(vi) was renumbered as paragraph (d)(3)(v), and revised to clarify by changing "success of management measures" to "success and impacts of management measures."

A new paragraph (d)(4) was added. It states: "Transparency in the fishery management process is enhanced by complementing the SAFE report with the documentation of previous management actions taken by the Council and Secretary including a summary of the previous ACLs, ACTs, and accountability measures (AMs), and

assessment of management uncertainty."

Paragraph (d)(4) was renumbered as paragraph (d)(5).

Paragraph (d)(4)(i) was renumbered as paragraph (d)(5)(i), and revised by adding: "Sources of information in the SAFE report should be referenced, unless the information is proprietary."

Paragraph (d)(4)(ii) was renumbered as paragraph (d)(5)(ii).

Paragraph (e)(3) was revised for clarification by adding: "Scientific information collections for stocks managed cooperatively by Federal and State governments should be coordinated with the appropriate state jurisdictions, to the extent practicable, to ensure harvest information is available for the management of stocks that utilize habitats in state and federal managed waters."

## VI. References Cited

- National Research Council of the National Academies (NRC). 2004. Improving the use of the "best scientific information available" standard in fisheries management. The National Academies Press, Washington, DC 105 pp.; <http://www.nap.edu/openbook.php>
- NOAA Office of the Chief Information Officer & High Performance Computing and Communications. 2006. National Oceanic and Atmospheric Administration Policy on Conflicts of Interest for Peer Review Subject to OMB Peer Review Bulletin. NOAA Memorandum, November 6, 2006; [http://www.cio.noaa.gov/Policy\\_Programs/NOAA\\_PRB\\_COI\\_Policy\\_110606.html](http://www.cio.noaa.gov/Policy_Programs/NOAA_PRB_COI_Policy_110606.html).
- Office of Management and Budget (OMB). 2004. Final Information Quality Bulletin for Peer Review. Executive Office of the President, Office of Management and Budget, memorandum M-05-03; December 16, 2004.

## VII. Classification

The NMFS Assistant Administrator has determined that this action is consistent with the provisions of the MSA and other applicable law.

This action has been determined to be not significant for purposes of Executive Order 12866.

The Chief Council for Regulation of the Department of Commerce certified to the Chief Council for Advocacy of the Small Business Administration during the proposed rule stage that this action would not have a significant economic impact on a substantial number of small entities. The factual basis for the certification was published in the

proposed rule and is not repeated here. No comments were received regarding this certification. As a result, a regulatory flexibility analysis was not required and none was prepared.

#### List of Subjects in 50 CFR Part 600

Fisheries, Fishing, Recordkeeping and reporting requirements.

Dated: July 16, 2013.

Alan D. Risenhoover,

Director, Office of Sustainable Fisheries, performing the functions and duties of the Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

For the reasons stated in the preamble, 50 CFR part 600 is to be amended as follows:

#### PART 600—MAGNUSON-STEVENS ACT PROVISIONS

■ 1. The authority citation for part 600 continues to read as follows:

Authority: 5 U.S.C. 561 and 16 U.S.C. 1801 *et seq.*

■ 2. Section 600.315 is revised to read as follows:

##### § 600.315 National Standard 2—Scientific Information.

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

(1) Fishery conservation and management require high quality and timely biological, ecological, environmental, economic, and sociological scientific information to effectively conserve and manage living marine resources. Successful fishery management depends, in part, on the thorough analysis of this information, and the extent to which the information is applied for:

(i) Evaluating the potential impact that conservation and management measures will have on living marine resources, essential fish habitat (EFH), marine ecosystems, fisheries participants, fishing communities, and the nation; and

(ii) Identifying areas where additional management measures are needed.

(2) Scientific information that is used to inform decision making should include an evaluation of its uncertainty and identify gaps in the information. Management decisions should recognize the biological (e.g., overfishing), ecological, sociological, and economic (e.g., loss of fishery benefits) risks associated with the sources of uncertainty and gaps in the scientific information.

(3) Information-limited fisheries, commonly referred to as “data-poor”

fisheries, may require use of simpler assessment methods and greater use of proxies for quantities that cannot be directly estimated, as compared to data-rich fisheries.

(4) Scientific information includes, but is not limited to, factual input, data, models, analyses, technical information, or scientific assessments. Scientific information includes data compiled directly from surveys or sampling programs, and models that are mathematical representations of reality constructed with primary data. The complexity of the model should not be the defining characteristic of its value; the data requirements and assumptions associated with a model should be commensurate with the resolution and accuracy of the available primary data. Scientific information includes established and emergent scientific information. Established science is scientific knowledge derived and verified through a standard scientific process that tends to be agreed upon often without controversy. Emergent science is relatively new knowledge that is still evolving and being verified, therefore, may potentially be uncertain and controversial. Emergent science should be considered more thoroughly, and scientists should be attentive to effective communication of emerging science.

(5) Science is a dynamic process, and new scientific findings constantly advance the state of knowledge. Best scientific information is, therefore, not static and ideally entails developing and following a research plan with the following elements: Clear statement of objectives; conceptual model that provides the framework for interpreting results, making predictions, or testing hypotheses; study design with an explicit and standardized method of collecting data; documentation of methods, results, and conclusions; peer review, as appropriate; and communication of findings.

(6) Criteria to consider when evaluating best scientific information are relevance, inclusiveness, objectivity, transparency and openness, timeliness, verification and validation, and peer review, as appropriate.

(i) *Relevance.* Scientific information should be pertinent to the current questions or issues under consideration and should be representative of the fishery being managed. In addition to the information collected directly about the fishery being managed, relevant information may be available about the same species in other areas, or about related species. For example, use of proxies may be necessary in data-poor situations. Analysis of related stocks or

species may be a useful tool for inferring the likely traits of stocks for which stock-specific data are unavailable or are not sufficient to produce reliable estimates. Also, if management measures similar to those being considered have been introduced in other regions and resulted in particular behavioral responses from participants or business decisions from industry, such social and economic information may be relevant.

(ii) *Inclusiveness.* Three aspects of inclusiveness should be considered when developing and evaluating best scientific information:

(A) The relevant range of scientific disciplines should be consulted to encompass the scope of potential impacts of the management decision.

(B) Alternative scientific points of view should be acknowledged and addressed openly when there is a diversity of scientific thought.

(C) Relevant local and traditional knowledge (e.g., fishermen’s empirical knowledge about the behavior and distribution of fish stocks) should be obtained, where appropriate, and considered when evaluating the BSIA.

(iii) *Objectivity.* Scientific information should be accurate, with a known degree of precision, without addressable bias, and presented in an accurate, clear, complete, and balanced manner. Scientific processes should be free of undue nonscientific influences and considerations.

(iv) *Transparency and openness.* (A) The Magnuson-Stevens Act provides broad public and stakeholder access to the fishery conservation and management process, including access to the scientific information upon which the process and management measures are based. Public comment should be solicited at appropriate times during the review of scientific information. Communication with the public should be structured to foster understanding of the scientific process.

(B) Scientific information products should describe data collection methods, report sources of uncertainty or statistical error, and acknowledge other data limitations. Such products should explain any decisions to exclude data from analysis. Scientific products should identify major assumptions and uncertainties of analytical models. Finally, such products should openly acknowledge gaps in scientific information.

(v) *Timeliness.* Mandatory management actions should not be delayed due to limitations in the scientific information or the promise of future data collection or analysis. In some cases, due to time constraints,

results of important studies or monitoring programs may be considered for use before they are fully complete. Uncertainties and risks that arise from an incomplete study should be acknowledged, but interim results may be better than no results to help inform a management decision. Sufficient time should be allotted to audit and analyze recently acquired information to ensure its reliability. Data collection methods are expected to be subjected to appropriate review before providing data used to inform management decisions.

(A) For information that needs to be updated on a regular basis, the temporal gap between information collection and management implementation should be as short as possible, subject to regulatory constraints, and such timing concerns should be explicitly considered when developing conservation and management measures. Late submission of scientific information to the Council process should be avoided if the information has circumvented the review process. Data collection is a continuous process, therefore analysis of scientific information should specify a clear time point beyond which new information would not be considered in that analysis and would be reserved for use in subsequent analytical updates.

(B) Historical information should be evaluated for its relevance to inform the current situation. For example, some species' life history characteristics might not change over time. Other historical data (e.g., abundance, environmental, catch statistics, market and trade trends) provide time-series information on changes in fish populations, fishery participation, and fishing effort that may inform current management decisions.

(vi) *Verification and validation.* Methods used to produce scientific information should be verified and validated to the extent possible.

(A) *Verification* means that the data and procedures used to produce the scientific information are documented in sufficient detail to allow reproduction of the analysis by others with an acceptable degree of precision. External reviewers of scientific information require this level of documentation to conduct a thorough review.

(B) *Validation* refers to the testing of analytical methods to ensure that they perform as intended. Validation should include whether the analytical method has been programmed correctly in the computer software, the accuracy and precision of the estimates is adequate, and the estimates are robust to model

assumptions. Models should be tested using simulated data from a population with known properties to evaluate how well the models estimate those characteristics and to correct for known bias to achieve accuracy. The concept of validation using simulation testing should be used, to the extent possible, to evaluate how well a management strategy meets management objectives.

(vii) *Peer review.* Peer review is a process used to ensure that the quality and credibility of scientific information and scientific methods meet the standards of the scientific and technical community. Peer review helps ensure objectivity, reliability, and integrity of scientific information. The peer review process is an organized method that uses peer scientists with appropriate and relevant expertise to evaluate scientific information. The scientific information that supports conservation and management measures considered by the Secretary or a Council should be peer reviewed, as appropriate. Factors to consider when determining whether to conduct a peer review and if so, the appropriate level of review, include the novelty and complexity of the scientific information to be reviewed, the level of previous review and the importance of the information to be reviewed to the decision making process. Routine updates based on previously reviewed methods require less review than novel methods or data. If formal peer review is not practicable due to time or resource constraints, the development and analysis of scientific information used in or in support of fishery management actions should be as transparent as possible, in accordance with paragraph (a)(6)(iv) of this section. Other applicable guidance on peer review can be found in the Office of Management and Budget Final Information Quality Bulletin for Peer Review.

(b) *Peer review process.* The Secretary and each Council may establish a peer review process for that Council for scientific information used to advise about the conservation and management of the fishery. 16 U.S.C. 1852(g)(1)(E). A peer review process is not a substitute for an SSC and should work in conjunction with the SSC (see § 600.310(b)(2)(v)(C)). This section provides guidance and standards that should be followed in order to establish a peer review process per Magnuson-Stevens Act section 302(g)(1)(E).

(1) The objective or scope of the peer review, the nature of the scientific information to be reviewed, and timing of the review should be considered when selecting the type of peer review to be used. The process established by

the Secretary and Council should focus on providing review for information that has not yet undergone rigorous peer review, but that must be peer reviewed in order to provide reliable, high quality scientific advice for fishery conservation and management. Duplication of previously conducted peer review should be avoided.

(i) *Form of process.* The peer review process may include or consist of existing Council committees or panels if they meet the standards identified herein. The Secretary and Council have discretion to determine the appropriate peer review process for a specific information product. A peer review can take many forms, including individual letter or written reviews and panel reviews.

(ii) *Timing.* The peer review should, to the extent practicable, be conducted early in the process of producing scientific information or a work product, so peer review reports are available for the SSC to consider in its evaluation of scientific information for its Council and the Secretary. The timing will depend in part on the scope of the review. For instance, the peer review of a new or novel method or model should be conducted before there is an investment of time and resources in implementing the model and interpreting the results. The results of this type of peer review may contribute to improvements in the model or assessment.

(iii) *Scope of work.* The scope of work or charge (sometimes called the terms of reference) of any peer review should be determined in advance of the selection of reviewers. The scope of work contains the objectives of the peer review, evaluation of the various stages of the science, and specific recommendations for improvement of the science. The scope of work should be carefully designed, with specific technical questions to guide the peer review process; it should ask peer reviewers to ensure that scientific uncertainties are clearly identified and characterized, it should allow peer reviewers the opportunity to offer a broad evaluation of the overall scientific or technical product under review, as well as to make recommendations regarding areas of missing information, future research, data collection, and improvements in methodologies, and it must not change during the course of the peer review. The scope of work may not request reviewers to provide advice on policy or regulatory issues (e.g., amount of precaution used in decision-making) which are within the purview of the Secretary and the Councils, or to make formal fishing level

recommendations which are within the purview of the SSC.

(2) *Peer reviewer selection.* The selection of participants in a peer review should be based on expertise, independence, and a balance of viewpoints, and be free of conflicts of interest.

(i) *Expertise and balance.* Peer reviewers must be selected based on scientific expertise and experience relevant to the disciplines of subject matter to be reviewed. The group of reviewers that constitute the peer review should reflect a balance in perspectives, to the extent practicable, and should have sufficiently broad and diverse expertise to represent the range of relevant scientific and technical perspectives to complete the objectives of the peer review.

(ii) *Conflict of interest.* Peer reviewers who are federal employees must comply with all applicable federal ethics requirements. Potential reviewers who are not federal employees must be screened for conflicts of interest in accordance with the NOAA Policy on Conflicts of Interest for Peer Review Subject to OMB's Peer Review Bulletin or other applicable rules or guidelines.

(A) Under the NOAA policy, peer reviewers must not have any conflicts of interest with the scientific information, subject matter, or work product under review, or any aspect of the statement of work for the peer review. For purposes of this section, a conflict of interest is any financial or other interest which conflicts with the service of the individual on a review panel because it: could significantly impair the reviewer's objectivity, or could create an unfair competitive advantage for a person or organization.

(B) No individual can be appointed to a review panel if that individual has a conflict of interest that is relevant to the functions to be performed. For reviews requiring highly specialized expertise, the limited availability of qualified reviewers might result in an exception when a conflict of interest is unavoidable; in this situation, the conflict must be promptly and publicly disclosed. Conflicts of interest include, but are not limited to, the personal financial interests and investments, employer affiliations, and consulting arrangements, grants, or contracts of the individual and of others with whom the individual has substantial common financial interests, if these interests are relevant to the functions to be performed.

(iii) *Independence.* Peer reviewers must not have contributed or participated in the development of the work product or scientific information

under review. For peer review of products of higher novelty or controversy, a greater degree of independence is necessary to ensure credibility of the peer review process. Peer reviewer responsibilities should rotate across the available pool of qualified reviewers or among the members on a standing peer review panel to prevent a peer reviewer from repeatedly reviewing the same scientific information, recognizing that, in some cases, repeated service by the same reviewer may be needed because of limited availability of specialized expertise.

(3) *Transparency.* A transparent process is one that ensures that background documents and reports from peer review are publicly available, subject to Magnuson-Stevens Act confidentiality requirements, and allows the public full and open access to peer review panel meetings. The evaluation and review of scientific information by the Councils, SSCs or advisory panels must be conducted in accordance with meeting procedures at § 600.135. Consistent with that section, public notice of peer review panel meetings should be announced in the *Federal Register* with a minimum of 14 days and with an aim of 21 days before the review to allow public comments during meetings. Background documents should be available for public review in a timely manner prior to meetings. Peer review reports describing the scope and objectives of the review, findings in accordance with each objective, and conclusions should be publicly available. Names and organizational affiliations of reviewers also should be publicly available.

(4) *Publication of the peer review process.* The Secretary will announce the establishment of a peer review process under Magnuson-Stevens Act section 302(g)(1)(E) in the *Federal Register* along with a brief description of the process. In addition, detailed information on such processes will be made publicly available on the Council's Web site, and updated as necessary.

(c) *SSC scientific evaluation and advice to the Council.* Each scientific and statistical committee shall provide its Council ongoing scientific advice for fishery management decisions, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield, achieving rebuilding targets, and reports on stock status and health, bycatch, habitat status, social and economic impacts of management measures, and sustainability of fishing practices. 16 U.S.C. 1852(g)(1)(B).

(1) SSC scientific advice and recommendations to its Council are based on scientific information that the SSC determines to meet the guidelines for best scientific information available as described in paragraph (a) of this section. SSCs may conduct peer reviews or evaluate peer reviews to provide clear scientific advice to the Council. Such scientific advice should attempt to resolve conflicting scientific information, so that the Council will not need to engage in debate on technical merits. Debate and evaluation of scientific information is the role of the SSC.

(2) An SSC member may participate in a peer review when such participation is beneficial to the peer review due to the expertise and institutional memory of that member, or beneficial to the Council's advisory body by allowing that member to make a more informed evaluation of the scientific information. Participation of an SSC member in a peer review should not impair the ability of that member to fulfill his or her responsibilities to the SSC.

(3) If an SSC as a body conducts a peer review established under Magnuson-Stevens Act section 302(g)(1)(E) or individual members of an SSC participate in such a peer review, the SSC members must meet the peer reviewer selection criteria as described in paragraph (b)(2) of this section. In addition, the financial disclosure requirements under § 600.235, Financial Disclosure for Councils and Council committees, apply. When the SSC as a body is conducting a peer review, it should strive for consensus and must meet the transparency guidelines under paragraphs (a)(6)(iv) and (b)(3) of this section. If consensus cannot be reached, minority viewpoints should be recorded.

(4) The SSC's evaluation of a peer review conducted by a body other than the SSC should consider the extent and quality of peer review that has already taken place. For Councils with extensive and detailed peer review processes (e.g., a process established pursuant to Magnuson-Stevens Act section 302(g)(1)(E)), the evaluation by the SSC of the peer reviewed information should not repeat the previously conducted and detailed technical peer review. However, SSCs must maintain their role as advisors to the Council about scientific information that comes from a peer review process. Therefore, the peer review of scientific information used to advise the Council, including a peer review process established by the Secretary and the Council under Magnuson-Stevens Act section



302(g)(1)(E), should be conducted early in the scientific evaluation process in order to provide the SSC with reasonable opportunity to consider the peer review report and make recommendations to the Council as required under Magnuson-Stevens Act section 302(g)(1)(B).

(5) If an SSC disagrees with the findings or conclusions of a peer review, in whole or in part, the SSC must prepare a report outlining the areas of disagreement, and the rationale and information used by the SSC for making its determination. This report must be made publicly available.

(6) Annual catch limits (ACLs) developed by a Council may not exceed its SSC's fishing level recommendations. 16 U.S.C. 1852(h)(6). Per the National Standard 1 Guidelines, the SSC fishing level recommendation that is most relevant to ACLs is acceptable biological catch (ABC), as both ACL and ABC are levels of annual catch (see § 600.310(b)(2)(v)(D)). The SSC is expected to take scientific uncertainty into account when making its ABC recommendation (§ 600.310(f)(4)). The ABC recommendation may be based upon input and recommendations from the peer review process. Any such peer review related to such recommendations should be conducted early in the process as described in paragraph (c)(4) of this section. The SSC should resolve differences between its recommendations and any relevant peer review recommendations per paragraph (c)(5) of this section.

(d) *SAFE Report.* The term *SAFE* (Stock Assessment and Fishery Evaluation) report, as used in this section, refers to a public document or a set of related public documents, that provides the Secretary and the Councils with a summary of scientific information concerning the most recent biological condition of stocks, stock complexes, and marine ecosystems in the fishery management unit (FMU), essential fish habitat (EFH), and the social and economic condition of the recreational and commercial fishing interests, fishing communities, and the fish processing industries. Each *SAFE* report must be scientifically based with appropriate citations of data sources and information. Each *SAFE* report summarizes, on a periodic basis, the best scientific information available concerning the past, present, and possible future condition of the stocks, EFH, marine ecosystems, and fisheries being managed under Federal regulation.

(1) The Secretary has the responsibility to ensure that *SAFE*

reports are prepared and updated or supplemented as necessary whenever new information is available to inform management decisions such as status determination criteria (SDC), overfishing level (OFL), optimum yield, or ABC values (§ 600.310(c)). The *SAFE* report and any comments or reports from the SSC must be available to the Secretary and Council for making management decisions for each FMP to ensure that the best scientific information available is being used. The Secretary or Councils may utilize any combination of personnel from Council, State, Federal, university, or other sources to acquire and analyze data and produce the *SAFE* report.

(2) The *SAFE* report provides information to the Councils and the Secretary for determining annual catch limits (§ 600.310(f)(5)) for each stock in the fishery; documenting significant trends or changes in the resource, marine ecosystems, and fishery over time; implementing required EFH provisions (§ 600.815(a)(10)); and assessing the relative success of existing relevant state and Federal fishery management programs. The *SAFE* report should contain an explanation of information gaps and highlight needs for future scientific work. Information on bycatch and safety for each fishery should also be summarized. In addition, the *SAFE* report may be used to update or expand previous environmental and regulatory impact documents and ecosystem descriptions.

(3) Each *SAFE* report should contain the following scientific information when it exists:

(i) Information on which to base catch specifications and status determinations, including the most recent stock assessment documents and associated peer review reports, and recommendations and reports from the Council's SSC.

(A) A description of the SDC (e.g., maximum fishing mortality rate threshold and minimum stock size threshold for each stock or stock complex in the fishery) (§ 600.310(e)(2)).

(B) Information on OFL and ABC, preventing overfishing, and achieving rebuilding targets. Documentation of the data collection, estimation methods, and consideration of uncertainty in formulating catch specification recommendations should be included (§ 600.310(f)(2)). The best scientific information available to determine whether overfishing is occurring with respect to any stock or stock complex, whether any stock or stock complex is overfished, whether the rate or level of fishing mortality applied to any stock or stock complex is approaching the

maximum fishing mortality threshold, and whether the size of any stock or stock complex is approaching the minimum stock size threshold; and

(C) The best scientific information available in support of management measures necessary to rebuild an overfished stock or stock complex (if any) in the fishery to a level consistent with producing the MSY in that fishery.

(ii) Information on sources of fishing mortality (both landed and discarded), including commercial and recreational catch and bycatch in other fisheries and a description of data collection and estimation methods used to quantify total catch mortality, as required by the National Standard 1 Guidelines (§ 600.310(i)).

(iii) Information on bycatch of non-target species for each fishery.

(iv) Information on EFH to be included in accordance with the EFH provisions (§ 600.815(a)(10)).

(v) Pertinent economic, social, community, and ecological information for assessing the success and impacts of management measures or the achievement of objectives of each FMP.

(4) Transparency in the fishery management process is enhanced by complementing the *SAFE* report with the documentation of previous management actions taken by the Council or Secretary including a summary of the previous ACLs, ACTs, and accountability measures (AMs), and assessment of management uncertainty.

(5) To facilitate the use of the information in the *SAFE* report, and its availability to the Council, NMFS, and the public:

(i) The *SAFE* report should contain, or be supplemented by, a summary of the information and an index or table of contents to the components of the report. Sources of information in the *SAFE* report should be referenced, unless the information is proprietary.

(ii) The *SAFE* report or compilation of documents that comprise the *SAFE* report and index must be made available by the Council or NMFS on a readily accessible Web site.

(e) *FMP development.*—(1) 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.

(2) The fact that scientific information concerning a fishery is incomplete does not prevent the preparation and implementation of an FMP (see related §§ 600.320(d)(2) and 600.340(b)).

(3) An FMP must specify whatever information fishermen and processors will be required or requested to submit to the Secretary. Information about harvest within state waters, as well as in the EEZ, may be collected if it is needed for proper implementation of the FMP and cannot be obtained otherwise. Scientific information collections for stocks managed cooperatively by Federal and State governments should be coordinated with the appropriate

state jurisdictions, to the extent practicable, to ensure harvest information is available for the management of stocks that utilize habitats in state and federal managed waters. 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.

(4) An FMP should identify scientific information needed from other sources to improve understanding and management of the resource, marine

ecosystem, the fishery, and fishing communities.

(5) The information submitted by various data suppliers should be comparable and compatible, to the maximum extent possible.

(6) FMPs should be amended on a timely basis, as new information indicates the necessity for change in objectives or management measures consistent with the conditions described in paragraph (d) of this section (SAFE reports). Paragraphs (e)(1) through (5) of this section apply equally to FMPs and FMP amendments.

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