



2005 Market Street, Suite 1700 215.575.9050 Phone
Philadelphia, PA 19103-7077 215.575.4939 Fax

901 E Street NW, 10th Floor 202.552.2000 Phone
Washington, DC 20004 202.552.2299 Fax
www.pewtrusts.org

June 30, 2015

Wesley Patrick, Ph.D.
National Marine Fisheries Service, NOAA
Office of Sustainable Fisheries
1315 East-West Highway, Room 13357
Silver Spring, MD 20910

RE: Fisheries of the United States; Proposed Revisions to the Guidelines for National Standards 1, 3, and 7; Request for Public Comments

Dr. Patrick,

The Pew Charitable Trusts (Pew) submits the following comments regarding the proposed revisions (hereafter, PR) to guidelines for National Standards (NS) 1, 3, and 7 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).¹

We have serious concerns about many of the specific changes proposed, as well as deep misgivings about the overall direction the National Oceanic and Atmospheric Administration's Fisheries Service (agency) is indicating for the future of ocean fisheries management in the United States. Rather than improving the implementation of existing conservation requirements of the Magnuson-Stevens Act and providing useful, forward-thinking guidance for how to deal with modern ocean management problems, the agency appears to be bowing to political pressures and creating greater opportunities for risky management decisions. **The permissive strategies encouraged in the PR will, among other things, increase the likelihood of overfishing, leave fish populations at unhealthy levels, and exclude species in need of conservation from the management process. These policies are contrary to the letter and spirit of the Magnuson-Stevens Act requirements to prevent overfishing,² rebuild fish populations in as short a time as possible³, and ensure the management of fishery resources and the marine environment for the long-term benefit of the nation.⁴**

Thus, ***we urge the agency to extensively modify the PR*** by removing language and proposals that weaken fisheries management, and instead strengthen conservation and enhance the health of fish populations and marine ecosystems. Our detailed comments follow, and describe how the agency can substantially improve the proposed guideline revisions. In addition, we include an edited version of the proposed guidance changes in which we provide suggested language in blue text (hereafter, the "blueline"), which you will find as an appendix to this document. We otherwise retain the color coding of the agency-provided redline: black text is unchanged, existing guidance; red text is new, proposed language from the agency; green text is existing guidance moved to a new location in the guidance. To

¹ NOAA Fisheries. Magnuson-Stevens Act Provisions; National Standard Guidelines. Proposed Rule, Request for Comments. 80 Fed. Reg. 2786. Jan 20, 2015.

² 16 U.S.C. § 1851(a)(1)

³ 16 U.S.C. § 1854(e)

⁴ For example, see 16 U.S.C. § 1802(5), 16 U.S.C. § 1802(33), and 16 U.S.C. § 1851(a)(1).

assist the agency in reviewing our recommendations, we excerpt sections of the blueline throughout these comments.

Summary of Comments

The PR would increase the risk of overfishing, delay rebuilding, and exclude species from management. Specifically, we are concerned that the rule would allow fishery managers to:

- **Delay lowering catch limits in response to scientific information, increasing the risk of overfishing.** Putting off needed catch reductions jeopardizes the health of fish populations already in decline.⁵
- **Obscure information about overfishing.** By averaging several years of fishery data to determine the health of a population, managers could ignore individual years in which unsustainable fishing occurs and fail to take immediate action to set sustainable levels. This increases the risk that overfishing will continue.
- **Raise fishing quotas by carrying over the uncaught fish from a previous year without determining whether the population can sustain the additional fishing.** Sometimes, fishermen do not catch the full quota simply because they did not fish enough. But unused quota could also be a sign that the health of the population is worse than estimated and there are not enough fish in the water to meet the authorized catch level. Allowing uncaught fishing quotas to roll over without determining the potential impact is risky and could easily damage the health of a fish population, particularly one that is already overfished.
- **Exclude important fish species from management under the law.** Deciding which populations should be managed under the Magnuson-Stevens Act is a fundamental step toward ensuring that science-based rules are put in place to prevent overfishing. Under the proposal's new criteria for determining when regional fishery Council management is needed, short-term political or economic factors, the existence of weaker state management, or industry self-regulation could trump scientific considerations and block appropriate conservation measures.
- **Continue using deficient plans for rebuilding overfished stocks to healthy levels, instead of revising the plans to restore populations more quickly.** The proposal would allow managers to keep using rebuilding plans that did not meet their goals and to extend timelines for rebuilding overfished stocks for years or even decades beyond what would be allowed currently. Fish populations would remain at low levels longer than necessary, risking further collapse and providing little economic value to fishermen.
- **More easily group healthy and unhealthy stocks together for management purposes, increasing the risk of chronic overfishing of weaker stocks.** The proposal would let managers combine dissimilar fish populations and manage them jointly, without considering the health of individual

⁵ Steven A. Murawski, "Rebuilding depleted fish stocks: the good, the bad, and, mostly, the ugly," *ICES Journal of Marine Science* 67 (2010): 1830–40. Peter A. Shelton et al, "Fishing under low productivity conditions is further delaying recovery of Northwest Atlantic cod (*Gadus morhua*)," *Canadian Journal of Fisheries and Aquatic Sciences* 63, no. 2 (2006): 235–8.

populations. When managers know that a population is subject to or vulnerable to overfishing, they must prevent unsustainable catch of those species.

The oceans face new and growing pressures from habitat destruction, climate change, and expanded exploitation of marine resources. Unfortunately, NOAA Fisheries' proposal misses an opportunity to help fishery managers better tackle these and other challenges. Any revisions to the NS1 guidelines should promote a more comprehensive management approach that considers the effects of fishing on ocean ecosystems and how changes in the environment affect fishing. Instead, the proposed rule increases management risks for U.S. fish populations and fails to take the steps that are necessary to meet 21st-century challenges.

Section 1 – Thematic concerns and recommendations

1.1 - Fisheries management in the U.S. has improved under the requirements of the Magnuson-Stevens Act and the current NS1 guidelines, but the proposed changes jeopardize that progress.

The authors of the Fishery Conservation and Management Act of 1976 (later renamed the Magnuson-Stevens Act)⁶ were concerned about the declining state of our fisheries and realized the need to end overfishing, particularly by foreign fishing fleets accessing waters along America's coastline.⁷ However, over the course of the next two decades, managers focused primarily on expanding the U.S. domestic industry, to the point that by the late 1980s and early 1990s, many valuable fish populations across the nation were on the road to collapse.

Amendments in 1996 strengthened the Magnuson-Stevens Act by preventing managers from allowing overfishing and requiring them to establish timeframes for rebuilding overfished stocks as quickly as possible,⁸ but overfishing continued, particularly where fishery managers were given significant leeway. Managers often failed to set limits and ignored scientific advice. If limits were set, too often, there was little accountability if catches exceeded them.

It would take another decade, and recommendations from two blue-ribbon panels that assessed the health of America's oceans,⁹ before Congress took decisive bipartisan action to once again address shortcomings in the law. A fundamental objective of Congress in the 2006 Magnuson-Stevens Act reauthorization was to address the failure to end overfishing in U.S. fisheries.¹⁰ By requiring managers to heed the advice of scientists and set annual catch limits (ACLs) that do not allow overfishing and accountability measures (AMs) if they did, the reauthorization created the necessary framework to finally end overfishing, 30 years after the first version of the law was passed.

⁶ Magnuson-Stevens Fishery Conservation and Management Act, Public Law 94-265 (1976) as amended by Public Law 109-479 (2006), 16 U.S.C. 1801 et seq.

⁷ "The main thrust of the legislation is to provide a mechanism and program of conservation and management in order to save and revitalize the valuable fishery resources adjacent to our shores. Time was running out on many vital stocks. This was clear to anyone who understood the situation." Warren G. Magnuson, "The Fishery Conservation and Management Act of 1976: First Step Toward Improved Management of Marine Fisheries," *Washington Law Review* 52 (1977): 427.

⁸ Sustainable Fisheries Act, Public Law 104-297 (1996).

⁹ U.S. Commission on Ocean Policy, *An Ocean Blueprint for the 21st Century*, final report (2004), and the Pew Oceans Commission, *America's Living Oceans: Charting a Course for Sea Change* (2003).

¹⁰ Senate Report 109-229 on S 2012 (April 4, 2006), 21.

Nine years have passed and there are encouraging signs that U.S. fish populations are on the rebound. 32 stocks have been rebuilt since 2007 (39 in total since 2000), including haddock, summer flounder, black sea bass, king mackerel, and most recently, petrale sole and canary rockfish.¹¹ Of the 41 stocks experiencing overfishing in 2007, only 14 remain on the overfishing list.¹² The 2014 Status of the Stocks report highlighted that the number of U.S. fish stocks that were in an overfished condition or subject to overfishing were at all-time lows.¹³ In addition, U.S. commercial fishing revenues have risen 43 percent since 2006,¹⁴ and in 2012, approximately 11 million recreational anglers contributed \$58 billion in sales impacts and supported over 381,000 jobs.¹⁵ This is good news because robust, well-managed fish populations are important to the overall health of ocean ecosystems and the sustainability of commercial, recreational, and subsistence fishing in the U.S.

Today, the conservation requirements in the Magnuson-Stevens Act and current NS1 guidelines¹⁶ to prevent overfishing, rebuild stocks, and firmly establish science-based fishery management are bearing fruit. Fishermen, chefs, consumers, scientists, and other members of the public are starting to see the benefits of rebuilding ocean fish populations. We should not retreat. We still have much work to do. But the PR undermines the guidance for preventing overfishing, rebuilding vulnerable fish populations, and implementing ACLs and AMs. Many of the changes would allow managers to use risky strategies that recall the failed policies of the past. We will provide extensive detail later in this document, but it is important to note the overall theme of our comments – the PR compromises the regulatory foundation that has been so important to the Nation’s recent fishery management successes.

1.2 - It is critical that the PR does not erode the science-based tools that are yielding strong results and are helping to secure the U.S.’s reputation as a global leader in fisheries management.

The Magnuson-Stevens Act contains strong mandates for scientifically-sound fishery management. NS2 requires that all conservation and management measures be based on the best scientific information available (BSIA).¹⁷ The Magnuson-Stevens Act also requires that regional council Scientific and Statistical Committees (SSCs) provide fishing level recommendations to each Regional Fishery Management Council (Councils) that cannot be exceeded by Councils when setting catch levels.¹⁸ The BSIA standard and the contributions of the SSCs in setting sustainable catch limits based on science has been instrumental in the rebound of U.S. fish populations.

¹¹ NOAA Fisheries. Status of Stocks updates from the fourth quarter of 2014. Available online at http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/status_updates.html; Pacific Fishery Management Council. “Petrale sole and canary rockfish, important West Coast groundfish stocks, rebuilt to sustainable level.” June 15, 2015. <http://www.pcouncil.org/2015/06/37408/petrale-sole-and-canary-rockfish-important-west-coast-groundfish-stocks-rebuild-to-sustainable-level/>

¹² NOAA Fisheries. Status of Stocks 2014 Annual Report to Congress on the Status of U.S. Fisheries. (2015) http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/archive/2014/2014_status_of_stocks_final_web.pdf

¹³ NOAA Fisheries. Status of Stocks 2014.

¹⁴ NOAA Fisheries. Commercial Fisheries Statistics from 2007 and 2013. Available online at <http://www.st.nmfs.noaa.gov/st1/publications.html>

¹⁵ NOAA Fisheries. Fisheries Economics of the United States, 2012. <http://www.st.nmfs.noaa.gov/Assets/economics/documents/feus/2012/FEUS2012.pdf>

¹⁶ 74 Fed. Reg. at 3178.

¹⁷ 16 U.S.C. § 1851(a)(2).

¹⁸ 16 U.S.C. § 1852(h)(6); 16 U.S.C. § 1852(g)(1)(B).

The PR appears to weaken and obscure the role of science in fisheries management. Some of these changes may be intended to streamline the guidelines by eliminating duplication of provisions. However, fishery management is technical and complicated, and plain-language guidance is important to ensure managers fully understand their responsibilities and public stakeholders appreciate the basis of management decisions. Deletions of phrases like “based on the best scientific information available” throughout the PR diminish the utility of the guidance, and could be interpreted by some as lessening the import of this bedrock standard. We strongly recommend that these phrases be restored throughout the NS1 guidelines. Additionally, we recommend making the relationship between NS2 and the rest of the national standards more clear by bringing the description of the relationships between standards to the general section of the guidelines. Thus, our blueline contains a new section at § 600.305(d) that replaces § 600.310(l) (proposed), and where we clarify that SSCs shall (as opposed to should) advise their Councils on the use of BSIA (We will revisit our recommended section § 600.305(d) in the next section of our comments.).

Additionally, the PR appears to limit the involvement of the SSC in setting acceptable biological catches (ABCs) and ABC control rules. Per § 302(h)(6) of the Magnuson-Stevens Act, the Council develops the ACL but it “may not exceed the fishing level recommendations of its scientific and statistical committee.” This requirement was a major legislative improvement in the 2006 reauthorization.¹⁹ While the PR retains language stating that control rules are “established by the Council *in consultation* with its SSC,”²⁰ it deletes existing language clearly stating that “the SSC must recommend the ABC to the Council”²¹ and requiring the ABC control rule be “based on scientific advice from its SSC.”²² These changes minimize the role of the SSC and science in the catch limit setting process, and weaken the requirement that Councils cannot exceed the SSC’s fishing level recommendations. This legal mandate should be explicitly clear. We recommend restoring the existing language related to the SSC role in setting ABCs and ABC control rules and the BSIA language throughout the guidelines (see the blueline for details; we will also discuss this in more detail when we comment on other changes to the ABC).

1.3 - The NS1 conservation measures have priority over other national standards, but the PR is retreating from this established principle.

The requirements in NS1 to prevent overfishing and to achieve optimum yield (OY) on a continuing basis take priority over the implementation of other national standards or management goals. This has been established multiple times - see 16 U.S.C. 1851(a)(1); *NRDC v. Daley*, 209 F.3d 747, 753 (D.C. Cir. 2000) (“[U]nder the Fishery Act, the Service must give priority to conservation measures. It is only when two

¹⁹ 16 U.S.C. § 1852(g)(1)(B) (“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, 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.”); 16 U.S.C. § 1852(h)(6) (“Each Council shall, in accordance with the provisions of this Act— 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)”).

²⁰ 80 Fed. Reg. at 2806; proposed rule at 50 C.F.R. § 600.310 (f)(1)(iv) (emphasis added).

²¹ NOAA Fisheries National Standard 1, Ongoing Revisions, “Red-line document,” available at http://www.nmfs.noaa.gov/sfa/laws_policies/national_standards/documents/redline_ns-1-3-7_1.9.2015_final.pdf. p 15.

²² NOAA Fisheries “Red-line document,” p 15.

different plans achieve similar conservation measures that the Service takes into consideration adverse economic consequences.”); *NRDC v. NMFS*, 421 F.3d 872, 879 (9th Cir. 2005) (“The purpose of the Act is clearly to give conservation of fisheries priority over short-term economic interests.”).

However, the agency appears to diminish this tenet. The PR deletes language from § 600.310(l) of the existing guidelines (“Relationship of National Standard 1 to other national standards”) that states that the requirements of the other national standards “do not alter the requirement to prevent overfishing and rebuild overfished stocks.”²³ It further adds multiple instances of guidance that managers consider “trade-offs” when determining fishery objectives²⁴ and the risk policy for setting ABCs.²⁵ The agency should not advance consideration of trade-offs absent guidance on how to appropriately weigh the factors – it must be clear that the conservation mandates are fundamental and have primacy over others.

The agency must make it clear in the guidelines what priorities take precedence – and it has been clearly established in the courts that it is the conservation mandates embedded in NS1 that outweigh the others. Thus, we recommend several changes to the PR. First, as mentioned previously, we recommend a new § 600.305(d) that replaces § 600.310(l) (proposed). This new section serves as an introduction to all the national standards and would clarify the priorities and interactions among them at the outset, rather than discussing these issues at the end of one of the standards, missing an opportunity to provide a proper introductory overview. Our proposed new § 600.305(d) contains language that clarifies that the NS1 requirements take priority over economic and other considerations embodied in other national standards. Further, we recommend changes to § 600.305(b) (proposed) to clarify that fishery management plans must resolve conflicting objectives by giving NS1 priority. We also recommend removing references to consideration of “trade-offs” throughout the guidelines.

Highlighted recommendations:

Please see the blueline in the appendix of this document for our complete recommendations. We excerpt sections here for additional discussion.

§600.305(d) – We suggest modifications which would clearly identify the relationships between standards, particularly the precedence of NS1 and the importance of NS2.

(d) Relationship between National Standards— General. National Standard 1 establishes the requirement to prevent overfishing and achieve optimum yield, and must be achieved in all cases. National Standards 2 through 10 do not alter the requirement of National Standard 1, but instead provide further considerations to be taken into account in the course of satisfying the conservation mandate of National Standard 1. Guidelines for the National Standards are provided in §§ 600.310 – 600.355. Below is a description of how some of the other National Standards intersect with National Standard 1 each other.

(1) National Standard 1 (see § 600.310). National Standard 1 requires that FMPs prevent overfishing while achieving optimum yield on a continuing basis. Priority must be given to the conservation requirements embodied in National Standard 1 when resolving any perceived tension among various requirements set forth in the national standards.

²³ NOAA Fisheries “Red-line document,” p 22.

²⁴ NOAA Fisheries “Red-line document,” p 11.

²⁵ NOAA Fisheries “Red-line document,” p 14 and 16.

~~(12)~~ *National Standard 2* (see § 600.315). All ~~M~~management measures and reference points to implement ~~NS1~~the national standards must be based on the best scientific information available. When data are insufficient to estimate reference points directly, Councils should develop reasonable proxies to the extent possible (also ~~see paragraph~~see paragraph see § 600.310(e)(1)(iv)(B) of this section). In cases where scientific data are severely limited, effort should also be directed to identifying and gathering the needed data. SSCs ~~should~~ shall advise their Councils regarding the best scientific information available for fishery management decisions.

~~(23)~~ *National Standard 3* (see § 600.320). Reference points should generally be specified in terms of the level of stock aggregation for which the best scientific information is available (also see paragraph (e)(1)(iii) of this section). ~~Also, scientific assessments must be based on the best information about the total range of the stock and potential biological structuring of the stock into biological sub-units, which may differ from the geographic units on which management is feasible.~~ § 600.310(e)(1)(ii) and (iii) of this section).

~~(34)~~ *National Standard 6* (see § 600.335). Councils must build into the reference points and control rules appropriate consideration of risk, taking into account uncertainties in estimating harvest, stock conditions, life history parameters, or the effects of environmental factors.

~~(45)~~ *National Standard 8* (see § 600.345). National Standard 8 ~~directs the Councils to apply~~addresses economic and social ~~factors towards sustained participation of fishing communities~~considerations and ~~minimizing~~ to the extent practicable, ~~minimize~~ adverse economic impacts on ~~such~~fishing communities ~~within the context of while~~ preventing overfishing and rebuilding overfished stocks as required under National Standard 1. ~~Therefore, calculation~~ Calculation of OY as reduced from MSY ~~should include also includes consideration of~~ economic and social factors, but the combination of management measures chosen to achieve the OY must principally be designed to prevent overfishing and rebuild overfished stocks.

~~(56)~~ *National Standard 9* (see § 600.350). Evaluation of stock status with respect to reference points must take into account mortality caused by bycatch. In addition, the estimation of catch should include the mortality of fish that are discarded.

1.4 - Fishery management challenges exist in all regions, but the proper way to confront them is not to lower the bar for success and exacerbate uneven implementation among regions.

The PR highlights numerous challenges facing Councils – managing data limited stocks,²⁶ preventing overfishing in stock complexes,²⁷ dealing with uncertainty,²⁸ smoothing management responses to new information,²⁹ rebuilding overfished stocks,³⁰ and managing species for different user groups,³¹ to name a few. Councils must make difficult decisions in the absence of complete information in order to fulfill the statutory requirements of the Magnuson-Stevens Act. It is appropriate for the agency to provide guidance to the Councils for how to tackle these problems.

²⁶ 80 Fed. Reg. at 2789.

²⁷ 80 Fed. Reg. at 2790.

²⁸ 80 Fed. Reg. at 2789, 2793-2794.

²⁹ 80 Fed. Reg. at 2794.

³⁰ 80 Fed. Reg. at 2795.

³¹ 80 Fed. Reg. at 2797.

It is well-known that some regional Councils have had more success than others at meeting their conservation goals. While some of this can be attributed to biological and ecological circumstances or the cumulative impacts of a long history of overfishing, a great deal of it is due to a commitment in several regions to base decisions on science and employ precautionary measures to address uncertainties. In regions that lag behind, Councils have often dismissed similar approaches. For instance, Pew reviewed the management record of the New England Fishery Management Council over the past few decades, and found a record of risky decisions, a failure to heed warnings from scientists, and an unwillingness to take the actions needed to allow fish populations to recover from overfishing.³² In 2012, the U.S. Department of Commerce declared a fishery disaster for the New England multispecies groundfish fishery, the third such declaration for this fishery since 1994.³³ Last summer, scientists reported that cod stocks in the Gulf of Maine have fallen to historic lows.³⁴

Yet the agency seems unwilling to tackle these disparities and bring the underperforming regions into compliance with agency guidance. Rather than disseminating best practices and striving to bring all Councils to a higher standard of management, instead the PR lowers minimum standards with proposals to increase the “flexibility” of fishery management. This flexibility comes in the form of an increased risk of overfishing, an abdication of responsibility to rebuild fish stocks quickly, and loopholes that will allow managers to curb the number of stocks that receive conservation measures under the Magnuson-Stevens Act. Continuing to pursue these policies will result in the agency sacrificing the long-term health of marine resources to avoid short-term political pain.

We will discuss our specific objections to the agency’s proposal later in this document, and offer alternatives for certain ideas that have some merit but that, as drafted, are far too permissive. Other sections of the PR should be abandoned entirely. But in general, the agency should not respond to the challenges facing Councils by lowering the bar for management. This will only increase the disparity in management among Councils, and leave fish populations in underperforming regions more vulnerable to overfishing and collapse. And with stocks shifting due to climate change, one Council’s failure today can easily become another region’s problem tomorrow. The agency has a responsibility to improve management in all regions, and the PR fails to further that obligation.

1.5 - The PR fails to advance ecosystem-based fisheries management, contrary to the agency’s own priorities, and does nothing to prepare managers for the future challenges of ocean resource management.

In recent years, the agency has clearly indicated that it has both the authority and responsibility to move forward with implementing ecosystem-based fisheries management (EBFM).³⁵ This requires a shift from thinking about fish populations in isolation, and instead considering the broader picture which includes interactions between species, their habitat, and the humans that interact with them. The agency has called EBFM “central to our mission to sustainably manage fisheries,” identifying it as a science-based

³² The Pew Charitable Trusts. Risky Decisions: How denial and delay brought disaster to New England’s historic fishing grounds. (2015). <http://www.pewtrusts.org/~media/Assets/2014/09/Risky-Decisions.pdf>

³³ NOAA Fisheries. Commercial fishery disaster determinations. Accessed June 2015. http://www.nmfs.noaa.gov/sfa/sf3/disaster_determinations.htm

³⁴ Northeast Fisheries Science Center. Statement regarding new information showing continued decline of Gulf of Maine cod. Aug 1, 2014. http://www.nefsc.noaa.gov/press_release/pr2014/other/MA1402/

³⁵ NOAA Fisheries. Ecosystem-Based Fisheries Management. <http://www.st.nmfs.noaa.gov/ecosystems/ebfm/index>

management approach that “helps us end overfishing and rebuild stocks for the long term benefit of the nation by helping us respond to, anticipate, and manage impacts to fisheries from various components of the ecosystem.”³⁶ To implement EBFM, managers will need to maintain healthy levels of forage fish, identify and restore important habitats, reduce bycatch, evaluate the potential effects of new fisheries before allowing them to commence in order to ensure they will be sustainable, and create management plans with goals and objectives for the ecosystem, not just one fish stock.

Despite the agency identifying EBFM as a method for achieving the similar goals as NS1 – to end overfishing, to rebuild stocks, and to manage for the long-term benefit of the nation- the PR misses a significant opportunity to move management towards EBFM. The PR fails to take further action to improve management for forage fish, despite strong scientific support that these critical species need enhanced protections to preserve food web structure and function.³⁷ Management of forage fish should include consideration of the relative contribution of each forage species to the diets of key predators in response to population trends and ocean conditions, identification of oceanographic features that correlate with high relative densities of forage stocks and their predators, and the results of modeling analyses to identify the potential ecological effects of alternative catch strategies.

The PR also moves backwards on the management of bycatch species, suggesting that no accountability measures are necessary to control bycatch of fish stocks for which the populations are at such low levels the directed fishery for those stocks must be closed.³⁸ Further, the agency promotes the use of aggregate maximum sustainable yield (MSY) strategies,³⁹ a recent scientific method for which the management implementation is still fairly undeveloped and which comes with a high risk of individual populations collapsing.⁴⁰ We have further comments on aggregate MSY later in this document.

The one exception where the agency does take steps to advance EBFM in the PR is in the case of habitat. The agency instructs Councils to consider the value of maintaining productive habitat when calculating OY,⁴¹ and recommends Councils consider restoring habitat for species that are failing to rebuild.⁴² Pew strongly supports these additions. When stocks are failing to recover, identifying, conserving, and restoring habitats important to those species would increase the effectiveness of rebuilding efforts.

Additionally, the agency fails to address the increasing threats to the marine environment by ignoring the impacts of stressors like climate change, pollution, and increased demand on ocean resources. Ocean acidification may profoundly disrupt food webs. And as oceans become warmer, fish populations are shifting toward the poles, and in deeper waters, in search of cooler temperatures.⁴³ This could cause fish populations to shift from one Council’s geographic authority to another’s, as may be the case with blueline tilefish off the Atlantic coast. Yet the agency gives no guidance on how managers should identify the threats of changing oceans, resolve impending management confusion, and build the

³⁶ NOAA Fisheries. Status of Stocks 2014.

³⁷ Lenfest Forage Fish Task Force. “Little Fish, Big Impact: Managing a Crucial Link in Ocean Food Webs” (2014) <http://www.lenfestocean.org/en/research-projects/lenfest-forage-fish-task-force>

³⁸ NOAA Fisheries “Red-line document,” p 17.

³⁹ NOAA Fisheries “Red-line document,” p 8 and 13.

⁴⁰ Gaichas S, Gamble R, Fogarty M, Benoît H, et. al. (2012) Assembly rules for aggregate-species production models: simulations in support of management strategy evaluation. *Mar Ecol Prog Ser* 459:275–292

⁴¹ NOAA Fisheries “Red-line document,” p 11.

⁴² NOAA Fisheries “Red-line document,” p 10 and 22.

⁴³ Malin L. Pinsky *et al.*, “Marine Taxa Track Local Climate Velocities,” *Science* 341 (September 2013), 1239–1242, doi:10.1126/ science.1239352.

resilience of stocks before environmental change further disrupts their ecosystems. The agency is leaving the Councils to deal with these changes as a cascading series of emergencies, as opposed to advising them on how to prepare for the coming period of disruption.

We make suggestions as to how the agency can better incorporate EBFM into the NS1 guidelines in section 5 of our comments. But generally, this PR is a missed opportunity to make meaningful progress in EBFM, and the agency should seriously consider opportunities, even beyond what we suggest, to advance fisheries management towards a comprehensive system able to adapt to modern challenges.

Section 2 – Changes that would deny conservation and management measures to species

2.1 - The PR would exclude important fish species from management under the Magnuson-Stevens Act.

The PR would replace the current system of managing stocks that are determined to be “in a fishery,” including the current classifications of non-target stocks and ecosystem component species, with new criteria for determining if a stock is “in need of conservation and management.”⁴⁴ Deciding which fish populations should be managed under the Magnuson-Stevens Act is a fundamental, first step to ensure that science-based rules are put in place to prevent overfishing and address other important conservation objectives. The agency’s proposal is contrary to the requirements of the Magnuson-Stevens Act and would allow Councils to inappropriately exclude stocks from management that need conservation measures. ***Thus, we oppose the “conservation and management” framework as proposed. We offer suggested changes that must be accepted to adequately address our serious concerns; failing the adoption of these changes, we strongly recommend the revisions in the PR be removed and the guidelines should revert back to the current system.***

There are numerous problems with this new proposal.

First, the PR suggests the only stocks definitely in need of conservation and management (C&M) are those that are overfished, experiencing overfishing, or likely to become overfished or experience overfishing.⁴⁵ Indeed, when the Secretary determines that a stock is overfished, experiencing overfishing, or likely to become overfished or experience overfishing, Councils are required to implement a fishery management plan (FMP) or amendment to end overfishing and rebuild the stock.⁴⁶ These conditions track the Magnuson-Stevens Act. However, they address a specific set of particularly dire circumstances in which a plan or amendment is absolutely required. These conditions were not intended to, nor should, be the baseline for determining whether a particular fish stock should be managed under the Magnuson-Stevens Act. There are a number of other important reasons short of or unrelated to overfishing, for a fish stock to be managed in an FMP. This was confirmed by the Federal District Court for the District of Columbia, which rejected the agency’s assertion that FMPs need only be prepared when a stock is overfished, and said the agency “must demonstrate that they reasonably and rationally considered whether [the decision for whether a stock was in a fishery] complied with the National Standards and with the MSA’s directive that FMPs be generated for any fisheries requiring

⁴⁴ 80 Fed. Reg. at 2788-89; proposed rule at 50 C.F.R. § 600.305(c).

⁴⁵ NOAA Fisheries “Red-line document,” p 2.

⁴⁶ 16 U.S.C. § 1854(e).

conservation and management.⁴⁷ Further, many stocks still have an “unknown” status yet are part of directed fisheries and should be managed. If fishery managers strictly proceeded to determine which stocks required conservation and management as described by the PR, Councils could cease managing major fisheries, a significant step away from the last 40 years of management under the Magnuson-Stevens Act. This is contrary to good management principles – exercising caution up front to ensure stocks do not end up in dire situations means healthier oceans and ensures the long-term viability of commercial and recreational fishing businesses.

Second, the term “conservation and management” is defined in the Magnuson-Stevens Act,⁴⁸ and requires that the decision whether to manage a stock under an FMP be based on the need for rebuilding, restoring, or maintaining the resource and the marine environment, assuring a food supply and recreational benefits, avoiding long-term adverse effects on fishery resources and the marine environment, and ensuring a multiplicity of future use options for the resources. The PR offers instead a different, incompatible definition of C&M which combines biological criteria with socio-economic factors currently found in NS7 and its guidelines. Agency guidance can give additional clarity for how to implement the mandates of the law, but it cannot establish different criteria for terms that are inconsistent with the statute. Further, the factors in NS7, which are related to practicability, minimizing costs, and avoiding unnecessary duplication, apply to the C&M measures implemented in an FMP, not the threshold decision under § 302(h)(1) of the Magnuson-Stevens Act to manage stocks in need of C&M under an FMP.

Third, the PR introduces a concept of requiring a stock to be “predominately caught” (sic) in federal waters in order for it to require conservation and management under the Magnuson-Stevens Act. This limitation is not part of the statute. The statute requires that a Council determine which stocks require conservation and management for all stocks “under its authority.”⁴⁹ The new concept of being “predominately caught in federal waters” suggests that there is some baseline quantity, amount of landings, or level of effort required in certain waters to proceed with federal management of a stock. This discounts that, for many species, even very low landings can have significant negative effects on stock health. It also establishes a potential loophole from managing stocks that are overfished or subject to overfishing and are caught in federal waters, but not in sufficient quantities to meet the undefined predominant threshold. This suggested change in the PR could allow Councils to take no management actions on stocks most in need of C&M, based on however the Councils choose to define “predominately caught”. This suggested change is a significant deviation from the clear objectives of the Magnuson-Stevens Act to take immediate action to conserve and manage the fishery resources found

⁴⁷ *Flaherty v. Bryson*, 850 F.Supp.2d 38, 54-55 (D.C. Cir. 2012).

⁴⁸ 16 U.S.C. § 1802(5).

“(5) The term “conservation and management” refers to all of the rules, regulations, conditions, methods, and other measures

(A) which are required to rebuild, restore, or maintain, and which are useful in rebuilding, restoring, or maintaining, any fishery resource and the marine environment; and

(B) which are designed to assure that—

(i) a supply of food and other products may be taken, and that recreational benefits may be obtained, on a continuing basis;

(ii) irreversible or long-term adverse effects on fishery resources and the marine environment are avoided; and

(iii) there will be a multiplicity of options available with respect to future uses of these resources.”

⁴⁹ 16 U.S.C. § 1852(h)(1).

off the coasts of the United States - not just the ones “predominately caught in federal waters”. For these reasons, this standard should be dropped from the final guidelines.

Fourth, the PR contains unclear and improper guidance for how to consider the proposed factors for stocks that may need C&M but do not meet the overfished/overfishing threshold. Biological factors are to be considered “first,” but the term “first” does not imply that those factors weigh significantly in favor of management. The tenth factor proposed, which involves consideration of other existing (or future) management measures by other entities, weighs “heavily” against federal management. This factor alone has numerous problems: it suggests that Councils could deny C&M to stocks based on some other management that does not yet exist; it includes “industry self-regulation” as a type of management that could be considered consistent with the policies and standards of the Magnuson-Stevens Act; it fails to describe what “adequate management” would entail; and it discounts that the existence of alternative management (for example, state management) does not mean that additional management is unnecessary at the federal level to account for fishery interactions in federal waters. This standard should be dropped from the final guidance.

Finally, the PR removes useful definitions for “non-target species” and “ecosystem component species” (EC species). These are important concepts that indicate to managers that species beyond those specifically targeted by a fishery may still need C&M for purposes like setting sustainable catch levels and accountability measures, bycatch reduction, data collection, and monitoring ecosystem health. The Magnuson-Stevens Act, and particularly § 302(h) of the Act, does not limit the application of the law’s requirements to only stocks that are targeted. The test is whether a stock involved in a fishery requires conservation and management. In the PR’s section on recreational fisheries, the agency indicates that the changes in this section would allow the removal of C&M measures from non-target fish stocks that are captured, valued, and retained by fishermen. This raises many issues. There are very few species caught in federal waters that are only caught recreationally. Creating separate management situations where commercial fisheries have C&M but there is no data or accountability for the recreational catch will only make the Council process more complicated and contentious, and could jeopardize the health of the resource. Further, removing the definition of EC species yet retaining the concept without guidance on retention weakens the use of this category to monitor and protect species that are caught as bycatch or otherwise affected by the fishery. The importance of managing non-target and EC species is likely to increase as climate change perturbs the baseline health and distribution of species; removing guidance for how to consider these species is ill-advised and leaves Councils unprepared to address future problems. While issues have arisen as Councils have tried to implement the EC species category, this does not mean removing the definition is the solution. The agency has other means to provide guidance to the regions for how to consider preserving these ecologically-important stocks that while not targeted, are occasionally caught and retained.

We agree that the “in the fishery” system to determine which stocks need C&M needs to be improved. There are several examples where the application of that framework by the Councils and the agency has left many species without management. For instance, in the case of river herring and shad along the Atlantic Coast, despite undisputed scientific evidence these stocks require C&M, widespread support from scientists, recreational fishermen and conservation advocates, and four separate court challenges, managers have failed to include these species in FMPs. River herring and shad are important forage fish in ocean and coastal ecosystems. Once abundant all along the Atlantic seaboard, these species have declined to historic lows in recent decades as a result of overfishing, habitat loss, and other factors.⁵⁰

⁵⁰ 78 Fed. Reg. at 48,946-48.

These species are caught incidentally in the Atlantic herring and mackerel fisheries (and other fisheries), where they are landed and sold with sea herring as bait. These fisheries are dominated by industrial midwater trawl vessels that can catch hundreds of thousands of pounds of river herring and shad per year. While state managers have taken actions to limit catch (including moratoria), restore riparian habitat, and initiate costly dam removals, federal management of these species remains insufficient, as the agency has inappropriately applied factors taken from the NS7 guidelines to prevent managing these fish in FMPs under the Magnuson-Stevens Act.

The current system has also not given Councils clear guidance on what species require management. A narrow interpretation of the EC species definition from the Southeast Regional NOAA General Counsel office led to ten species being removed from management in the Gulf of Mexico region, and thirteen species in the South Atlantic region, based on *ad hoc* landings criteria established without systematic or comprehensive analysis.⁵¹ This is of concern because once species are removed from management, it is unlikely that they will continue to be monitored. For example, the health of stocks which were removed from management in the Gulf of Mexico almost two decades ago (*e.g.*, white grunt, black sea bass, and red porgy) remains uncertain as catch levels have not been closely monitored, nor have any assessments been completed.

Further, the current system is ill-equipped to deal with stocks that are shifting in range and does not encourage adaptive management strategies. Blueline tilefish is managed by the South Atlantic Fishery Management Council and is experiencing overfishing.⁵² But a dramatic increase in landings in the jurisdiction of the Mid-Atlantic Fishery Management Council has resulted in both Councils requesting emergency action from the agency to address the risk to the health of the species because of dissimilar management measures.⁵³ The current system of “in a fishery” failed to anticipate these changes, and the proposed approach in the PR fails to establish a precautionary system that could avoid dramatic overfishing as stocks react to climate change. Both the current system and the PR leave dealing with these inevitable problems to emergency actions, which disrupt fisheries and only address these issues after damage is already done.

We welcome improvements on the fundamental issue of which stocks should be actively managed under the Magnuson-Stevens Act. However, the PR, as we described above, is not an improvement. The PR creates more problems than the current system. Fundamentally, the narrow view that only stocks that meet overfished/overfishing criteria require management, and that other stocks should be subject to a review that relies on NS7 factors, is the wrong direction for the agency. These factors do not take into account sufficient biological and ecological considerations, and inappropriately emphasize cost and socioeconomic factors that should only be applied when designing the required and discretionary C&M

⁵¹ Final Generic Annual Catch Limits/Accountability Measures Amendment for the Gulf of Mexico Fishery Management Council’s Red Drum, Reef Fish, Shrimp, Coral and Coral Reefs, Fishery Management Plans. September 2011. Gulf of Mexico Fishery Management Council and National Marine Fisheries Service, Southeast Regional Office.

⁵² NOAA Fisheries. Stock Status as of March 31, 2015. (2015) http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/archive/2015/overfished_overfishing_stocks_q1_2015.pdf

⁵³ NOAA Fisheries. Blueline Tilefish Emergency Action: Environmental Assessment and Regulatory Impact Review. (2015). <http://www.greateratlantic.fisheries.noaa.gov/regs/2015/June/14tileblemergencyactionea.pdf>; South Atlantic Fishery Management Council. News Release: Federal Fishery Managers Address Proposed Regulations During Meeting Week. March 12, 2015. http://safmc.net/sites/default/files/News%20Releases/pdf/2015/Rev_NR_SAFMC_Mar2015Meeting_31215.pdf

measures for the FMP. For example, the Caribbean Fishery Management Council is undertaking an ambitious transition from species-based FMPs to island-based FMPs, which entails the development of criteria for choosing which species require C&M under the new island-specific FMPs. NOAA Fisheries recommended an approach similar to the one described in the PR. The Caribbean Council's SSC found this approach too limited, and has instead recommended an inclusive approach that considers species' ecological importance as well as the uncertainty of stock status determinations due to issues with catch reporting. In a region where historical landings and other data is very limited, many species are depleted and the health of the overall ecosystems are highly dependent on maintaining adequate levels of groups of species that perform specific ecological functions (*i.e.*, grazers, high-level predators, prey, etc.), the implementation of the proposed revisions could be particularly risky.

Thus, we recommend improvements to the PR to address the flaws of the C&M section. Our suggestions make clear that stocks that meet the overfished/overfishing criteria do need C&M, but those are not the only stocks that require management. We recommend removing the introduced concept of "predominately caught in federal waters" and replacing it with language more closely aligned with the Magnuson-Stevens Act's concept of Council jurisdiction. We recommend reworking the list of factors to adhere closely to the statutory definition of C&M. For example, we clarify that biological factors weigh heavily in favor of management, that all other factors are to be considered secondarily, and that the whole process of considering the factors for determining whether C&M is needed must be transparent, produce a detailed analysis in consultation with the SSCs of the criteria based on the best scientific information available (BSIA), and report on how the final determination was reached. We recommend restoring the guidance on non-target and ecosystem component species, as these are important concepts for managing individual stocks and advancing a more comprehensive approach to fishery management. Finally, the agency should consider issuing technical guidance on how Councils should implement adaptive management strategies that will deal with challenges such as shifting stocks and climate change.

We note that our recommendations remove the PR's tenth criteria, which would allow management by another entity other than the federal government to be sufficient to meet the policies and standards of the Magnuson-Stevens Act. The existence of other management entities does not remove the responsibility of the agency to fulfill its conservation and management responsibilities in its jurisdiction. For example, state management of a fish stock in near-shore waters, no matter how successful that management is, does not diminish the need to examine whether the stock meets the criteria for conservation and management measures in federal waters. If there is no need for the agency to manage a stock in federal waters, that should be clear from a fair analysis of the factors. This issue is becoming even more pressing as some recreational groups, and a few representatives in Congress, are advocating removal of the recreational sector of the red snapper fishery from federal management in the Gulf of Mexico. Many have cited Atlantic striped bass, currently managed by the Atlantic States Marine Fisheries Commission, as a model for effective state management. But those managers have struggled with preventing overfishing in recent years, the population appears to be in decline, and recent management actions may be inadequate to reign in fishing to sustainable levels.⁵⁴ Applying such a model to a fishery like the recreational sector of Gulf red snapper raises significant issues like

⁵⁴ Atlantic States Marine Fisheries Commission. News Release: ASMFC Atlantic striped bass board approves Addendum IV for implementation in 2015. Oct 31, 2014. http://www.asmfc.org/uploads/file/54539b9bpr43StripedBassAddIV_Approval.pdf; John McMurray. "Of Striped Bass and Bluefish and Bad Legislation." Blog for the Marine Fish Conservation Network. May 20, 2015. <http://conservefish.org/2015/05/20/of-striped-bass-and-bluefish-and-bad-legislation/>

jurisdictional authority in federal waters, scientific expertise to survey the health of the stock, and equity issues with the commercial sector. Further, there are questions of jurisdictional authority, as few regional management bodies have the authority of the Atlantic States Marine Fisheries Commission. Alternative management bodies may have a role in fisheries management, but are not a substitute for the agency meeting its responsibilities under the Magnuson-Stevens Act.

The current system for determining whether a fish stock should be managed under the Magnuson-Stevens Act could use improvement, but the PR would exacerbate existing problems and increase the likelihood that political pressures will prevent Councils from applying C&M to stocks that need them. We offer numerous recommendations to improve the PR's new construct for determining stocks in need of conservation and management. We consider these modifications essential to garner our support for this modification. Should our suggestions be rejected, the agency should fully revert back to the existing system in any final changes to the NS1 guidelines.

Highlighted recommendations:

Please see the blueline in the appendix of this document for our complete recommendations. We excerpt sections here for additional discussion.

§600.305(c)(1) – We suggest modifications which would clearly identify the responsibilities of the Councils to conserve and manage, in their jurisdiction: stocks that are overfished or experiencing overfishing, or likely to become either; and, stocks that meet the definition of “conservation and management” under the Magnuson-Stevens Act. We recommend modifications to the factors proposed by the agency to bring them in line with the statutory definition while providing additional guidance for how to achieve management in accordance with the Act. In our proposed factors:

- Factor (i) reflects the importance of the marine environment in the statutory definition,
- Factors (ii), (iii) and (v) are derived directly from the statutory definition,
- Factor (iv) reflects the focus on fishery resources in the statutory definition, and the statutory requirement to describe the fish involved in the fishery in § 303(a)(2) of the Magnuson-Stevens Act,⁵⁵
- Factors (vi) – (viii) reflect the statutory definition’s requirement to maintain a multiplicity of options for future uses, and the overall purposes of the act to promote the sustainable development of fisheries,⁵⁶ and
- Factor (ix) reviews whether measures are necessary to ensure the appropriate conservation and management of species.

(c) Stocks that require conservation and management.

(1) Magnuson-Stevens Act section 302(h)(1) requires a Council to prepare an FMP for each fishery under its authority that requires (or in other words, is in need of) conservation and management. Not every fishery requires Federal management. Magnuson Stevens Act Section 304(e) requires conservation and management of Aany stocks that are predominately caught in Federal waters within a Council’s geographical area of authority and that are overfished or subject to overfishing, or likely to become overfished or subject to overfishing. are considered to require conservation and management. In addition, Section

⁵⁵ 16 U.S.C. § 1853(a)(2).

⁵⁶ 16 U.S.C. § 1801(b).

3(5) of the Act defines the term “conservation and management.” Based on this definition, the following non-exhaustive list of factors should be used by a Council when deciding whether additional stocks require conservation and management:

- (i) The stock is an important component of the marine environment.
- (ii) The need to rebuild, restore, or maintain any fishery resources or the marine environment.
- (iii) The need to avoid irreversible or long term adverse effects on fishery resources or the marine environment.
- (iv) The stock is caught by the fishery.
- (v) The need to ensure a continuing supply of food or other products, as well as ensuring continuing benefits to commercial, recreational or subsistence users.
- ~~Whether an FMP can improve or maintain the condition of the stocks.~~
- ~~(iv) The stock is a target of a fishery.~~
- ~~(v) The stock is important to commercial, recreational, or subsistence users.~~
- ~~(vi) The fishery is important to the Nation and to the regional economy.~~
- (vi) The need to resolve competing interests and conflicts among user groups and whether an FMP can further that resolution.
- (vii) The economic condition of a fishery and whether an FMP can produce more efficient utilization.
- (viii) The needs of a developing fishery, and whether an FMP can foster orderly growth of the fishery and protect marine ecosystems.
- ~~(x) The extent to which the fishery could be or is already adequately managed by states, by state/Federal programs, by Federal regulations pursuant to other FMPs or international commissions, or by industry self-regulation, consistent with the policies and standards of the Magnuson-Stevens Act.~~

§600.305(c)(2) – We recommend clarifying that biological and ecological factors should be considered first and weigh heavily in favor of FMP management, and remove inappropriate weighting of additional factors. Further, we recommend strengthening the transparency of the process for consideration by requiring a detailed explanation, prepared in consultation with the SSC, of how the final determination was reached. This is critically important to allow stakeholders to follow and understand the management process. Additionally, we restore the concept that non-target stocks may require management.

(2) Both target and non-target species described in § 600.305(e)(11) and (12), may require conservation and management and be added to an FMP and, if so, they should be identified at the stock level. When considering adding a new stock to an FMP or keeping an existing stock within an FMP, Councils, in consultation with their SSCs, should prepare a thorough analysis of the factors, and any additional considerations that may be relevant to the particular stock. No single factor is dispositive, but Councils should consider weighting the factors as follows. Factors (c)(1)(i)-(iv) of this section should be considered first, as they address maintaining a fishery resource and the marine environment. See § 1802(5)(A),(B). These factors weigh heavily in favor of including a stock in an FMP. Councils should next consider factors (c)(1)(iv)-(ix) of this section, which set forth key economic, social, and other reasons contained within the MSA for an FMP action. See 16 U.S.C. §1802(5)(B). Regardless of whether any of the first nine factors indicates a conservation and management need, a Council should consider factor (c)(1)(x) of this section before deciding to include or maintain a stock in an FMP. In many some circumstances, adequate management of a fishery by states, state/Federal programs, or another Federal FMP

~~would eliminate the need for weigh heavily against a Federal FMP action. See, e.g., 16 U.S.C. § 1851(a)(7); 1856(a)(3). In evaluating the above criteria, a Council should consider the specific circumstances of a fishery, based on the best scientific information available, and provide a detailed explanation for how the above factors were considered in making a final determination. ; to determine whether there are biological, economic, social and/or operational concerns that can be addressed by Federal management.~~

§600.305(e) – We recommend restoring definitions of non-target and EC species, mirroring the agency’s choice to move the definition of “target species” into §305 of the guidelines.

§600.310(c) – We suggest restoring additional details regarding EC species, with minor edits to remove the “in the fishery” framework.

§600.340(c) – We recommend making minor changes to clarify that NS7 considerations are appropriately applied when designing the required and discretionary C&M measures for the FMP, not as a threshold for achieving the status of “in need of conservation and management.”

Section 3 – Changes that increase the risk of overfishing

Many changes in the PR increase the likelihood that fishery management actions will result in overfishing. Essentially, the agency is encouraging managers to push closer and closer towards the overfishing limit with their management decisions, reducing or encroaching into buffers for scientific and management uncertainty that are intended to prevent overfishing. These changes are dangerous, unwarranted and contrary to the intent of the law “to promote domestic commercial and recreational fishing under sound conservation and management principles.”⁵⁷ In several places, the agency justifies these risky strategies by suggesting they will increase the stability of fishery management.⁵⁸ The agency should instead increase the stability of management by ensuring that overfishing does not occur and by rebuilding overfished stocks and then maintaining them at healthy levels. Management and scientific uncertainty buffers could be reduced by improving the quality and timeliness of data that forms the basis of management decisions and sharing best practices for assessment and management among Councils. But instead, the agency has decided that uncertainty means that management levels should be set closer to the overfishing limit, rather than further away.

There will always be a level of instability in managing natural resources, especially with fisheries that require specific scientific tools for assessing population trends, are affected by fishing and non-fishing impacts, and are enthusiastically engaged in to serve a variety of needs, such as jobs, recreational enjoyment, and nutrition. To address fisheries instability, managers should provide adequate buffers so that fishing does not exceed limits designed to prevent overfishing. The ACL framework, if appropriately implemented, should significantly reduce the risk of overfishing by setting fishing limits below the overfishing limit at levels that account for scientific and management uncertainty. Stabilizing methodologies like multi-year ACLs, which provide regulatory certainty for the fishing industry, are already permitted. Therefore, we question the need for additional methodologies. We also

⁵⁷ 16 U.S.C. § 1801(b)(3).

⁵⁸ 80 Fed. Reg. at 2792: “Although the current approach to single year overfishing determinations has been in place since 1998 and has the benefit of simplicity in calculation and use, NMFS believes that multi-year overfishing SDCs can, in appropriate cases, be used effectively to protect the stock while providing stability to the fishery.” 80 Fed. Reg. at 2794: “The ability to make ACL adjustments that provide more stability to fishing participants, yet do not jeopardize the capacity of the stock or stock complex to produce MSY on a continuing basis, would be useful to Councils.”

fundamentally disagree with the agency's positions in the PR that stability should be created by changing definitions, lowering the thresholds for management action and response, and allowing fishing up to the overfishing limit. Below, we examine many of the changes the agency has put forward in the PR that would increase the risk of overfishing. In many cases, we ask the agency to revert back to the current system instead of weakening fisheries management. In some cases, we offer suggestions that would restore appropriate buffers, while allowing some of the techniques the agency puts forward to remain.

3.1 - The PR allows multi-year overfishing determinations, changing proven practices for determining whether overfishing is occurring and further increasing the risk of fishing above sustainable levels.

In 2006, Congress made it clear that fishery managers should take immediate action to prevent overfishing by adding a new and important requirement for all fishery management plans to establish and specify a system of annual catch limits (ACLs) and accountability measures (AMs) as part of its reauthorization of the Magnuson-Stevens Act. Specifically, each FMP must "establish a mechanism for specifying annual catch limits in the plan . . . at a level such that overfishing does not occur in the fishery, including measures to ensure accountability."⁵⁹ ACLs establish a maximum level of fishing that may occur for a species to prevent overfishing in a given year and serve as the basis for invoking AMs.⁶⁰ This mandate is unequivocal in its use of the word "annual." However, the agency's proposed rule would give Councils the option to determine overfishing status based on periods of up to three years, rather than annually.

Multi-year overfishing determinations could explicitly allow overfishing to occur in individual years. For instance, the last two years of an assessment could show overfishing is occurring, but averaging these with the initial year of the assessment could result in a determination that overfishing is not occurring. The last two years could indicate a trend that would go unaddressed, possibly until the next assessment (which, for many fisheries, would not occur until three years later). Multi-year overfishing determinations would create a loophole to delay an overfishing declaration in the hopes of a more favorable assessment in the future, while allowing overfishing to occur in individual years. Delaying necessary actions just means that the actions will need to be more severe when they are finally implemented. This allowance creates risky policy and should not be encouraged.

While multi-year averaging has been used routinely in the Southeast, recent decisions on the South Atlantic snowy grouper and gag illustrate the problems inherent with this approach, absent strong guidance. In the case of snowy grouper, a three-year average of data from the most recent assessment was used to find overfishing was *not* occurring, even though the terminal year of data (2012) indicated that overfishing *is* occurring.⁶¹ The repeal of the deepwater closure in 2012 likely contributed to increased fishing in the terminal year,⁶² and as this area remains open to deepwater fishing, those higher levels of fishing could be reasonably expected to continue – potentially putting at risk the health of a species that is highly vulnerable to overfishing because it is slow-growing, long-lived and typically caught in deep waters and thus too often does not survive when released.

⁵⁹ 16 U.S.C. § 1853(a)(15).

⁶⁰ 50 C.F.R. § 600.310(f)(2)(iv).

⁶¹ SEDAR 36, at: <http://sedarweb.org/sedar-36>.

⁶² Snapper-Grouper Amendment 17B (2010) established a fishery closure from 240-foot depth contour seaward for deepwater species; It was reopened through Snapper-Grouper Regulatory Amendment 11 (May 10, 2012).

In contrast, when a three-year average was applied to gag to find that overfishing is occurring,⁶³ NOAA Fisheries elected not to follow the SSC recommendation and made its 2014 overfishing determination based solely on the terminal year in the time series (2012), which indicated that overfishing was *not* occurring in that year. This variability, and the agency's own role in manipulating this system, is only further evidence suggesting that these methods are not appropriate without strict limitation to prevent abuse. The agency should not promote national adoption of this flawed concept without such limitations.

Finally, we question whether, in its proposed form, this change to the NS1 guidelines is necessary. The reasons the agency provides in the preamble for allowing multi-year overfishing determinations do not hold up under scrutiny. For example, the preamble argues that small overages may not necessarily harm the long-term productivity of a stock.⁶⁴ While this may be true, by the same token, the determination of overfishing does not trigger a one-size-fits-all response. § 600.310(j)(2)(i) (proposed) states: "Upon notification that a stock or stock complex is undergoing overfishing, a Council should immediately begin working with its SSC . . . to ensure that the ABC is set appropriately to end overfishing. Councils should evaluate the cause of overfishing, address the issue that caused overfishing, and reevaluate their ACLs and AMs to make sure they are adequate."⁶⁵ Per this guidance, if the overage is small and not expected to recur, little action would be necessary. On the other hand, if the overage is small but potentially recurring, some adjustments to ABC, ACL, or AMs may be appropriate. Thus, the fact that some instances of overfishing only involve a small exceedance of OFL/MFMT is not a reason to ignore them; instead, the overage should be acknowledged, and the system should be allowed to proceed and generate an appropriate response. Ignoring some instances of overfishing will undermine the system entirely, and actually increase the need for a higher-stakes response to overfishing later on—the exact problem the agency wishes to avoid.

We have deep concerns that allowing multi-year averaging without adequate restriction will lead to abuse. ***We recommend that the agency remove the section encouraging the use of multi-year periods to determining overfishing status in NS1, and issue strong technical guidance outlining specific, rare cases in which this methodology may be appropriate as an interim measure to deal with situations of extremely high uncertainty. This separate guidance must prevent abuse of the system and appropriately protect species for which this would be particularly risky. The primary focus in the guidance should be in attaining the best scientific understanding of the condition of the fishery.***

There have been limited circumstances, such as in the Southeast, where overfishing determinations using a multi-year average have provided robust status results in situations where annual catch data were limited or highly uncertain. One example where it could be argued that averaging the final three years of assessment data rather than determining exploitation status on the final year of data was in the 2009 SEDAR 10 update for gag in the Gulf of Mexico.⁶⁶ The final year of data showed a high spike in fishing mortality largely due to extremely high estimates in recreational catch produced by the Marine Recreational Fisheries Statistics Survey relative to previous years. The stock assessment panel, along with the Council's SSC, determined that using a three-year average in the face of such high uncertainty with the last year's data point provided a more robust assessment result. Using the multi-year averaging approach still resulted in an overfishing determination, and fishing mortality rates had to be cut

⁶³ The 3-year average F was 23% > Fmsy (i.e., F2010-2012/Fmsy = 1.23).

⁶⁴ 80 Fed. Reg. at 2791-92.

⁶⁵ NOAA Fisheries "Red-line document," p 19.

⁶⁶ SEDAR. 2009. Stock assessment of Gag in the Gulf of Mexico: SEDAR 10 update assessment. SEDAR, North Charleston, SC.

dramatically. Those cuts took place over the next two years following the assessment and, along with a few strong recruitment years in the mid-2000s, ended overfishing according the 2014 gag stock assessment.⁶⁷

However, we strongly feel this should be seen as an interim measure to address issues with uncertainty. This method fails to address the underlying issues that contribute to this problem, such as small buffers for uncertainties, weak accountability measures, and lack of reliable catch data. These issues should be addressed with additional funding and support from the agency, as well as the further development and implementation of data-limited methodologies.

As written, the averaging process may encourage Councils to ignore the most recent assessment data and use averaging to avoid taking action on overfishing. And simply requiring a “comprehensive analysis”⁶⁸ that this method will not jeopardize the capacity of the fishery to produce MSY on a continuing basis is not enough, absent guidance for what such a comprehensive analysis would contain and what circumstances would weigh against using such an approach. There is nothing preventing Councils from choosing to interpret the instruction in the PR to “identify in its FMP or FMP amendment circumstances in which the multi-year approach should not be used”⁶⁹ as permitting them to select whichever approach gives them the result of no overfishing. Decisions on selecting the final year or an average of the last three years of an assessment for a status determination should be grounded in strong scientific justification. The agency has an obligation to provide strong guidance on how and when these decisions should be made. For instance, SSCs providing final review of an assessment should weigh the magnitude of the outcomes from the single versus multi-year approach against the uncertainty of those outcomes. This technique should only be used in situations where the most recent year of catch data is so highly uncertain that averaging produces a more robust result. Further, the circumstances under which this methodology would be invoked should be specifically described upfront prior to conducting and reviewing the assessment results to avoid the Council or agency “cherry-picking” results as described above. Averaging should also not occur by combining data from multiple assessments.

We are concerned that there are some species which have life cycles or recruitment patterns that make this particularly risky. For example, if averaging was applied to species with relatively short life spans or those with highly variable recruitment, like Pacific sardine, fishing could disproportionately affect a given year class relative to current management, potentially short-circuiting an entire recruitment event before management would respond. For stocks with long life cycles, like many Pacific rockfish species, it is difficult to connect individual years of overfishing to measurable jeopardy in achieving MSY on a long-term, continuing basis, yet overfishing can still negatively affect these stocks. Thus, in these cases, averaging could regularly allow years of overfishing to occur, with negative cumulative effects. The Pacific Fishery Management Council has demonstrated that multi-year averaging is unneeded – the current system of OFLs, ABCs, and ACLs, combined with active catch monitoring, generally keeps catch well away from overfishing levels.

If the agency is to allow this methodology in the short-term, it must simultaneously address the fundamental issues of lack of reliable catch data, small buffers for uncertainties, and weak accountability measures. A far more preferable route would be for the agency to support an annual

⁶⁷ SEDAR. 2014. SEDAR 33: Gulf of Mexico Gag Stock Assessment Report. SEDAR, North Charleston, SC. 252 p.

⁶⁸ NOAA Fisheries “Red-line document,” 600.310(e)(2)(ii)(A)(3) proposed, p 9.

⁶⁹ NOAA Fisheries “Red-line document,” 600.310(e)(2)(ii)(A)(3) proposed, p 9-10.

catch specification process, which would negate the perceived need for allowing multi-year status determinations. This would entail requiring the science centers to update the key data inputs from assessments to provide a more real-time picture of the trajectory and health of the fishery, so that the Councils can make immediate management decisions. Going through a systematic catch specification process with updated data and analysis (*i.e.*, mini annual assessments) can help resolve a number of issues and enable management to be much more adaptive and responsive, and would prevent and curtail overfishing immediately.

Finally, we provide additional recommendations in our blueline for the agency to encourage the use of overfishing determinations that reduce lag time. There is a benefit for both conservation and management in reducing lag time between an overfishing determination and the management measures to address the issue. The agency has previously provided helpful discussion on the differences between the two methodologies in the question response section of the 2009 NS1 revisions, and should consider a way to provide useful guidance of this sort to the Councils.⁷⁰ Lag times only allow for unsustainable fishing behaviors to continue for longer before they are corrected with accountability measures, increasing the risk that the stock will become overfished and likely increasing the severity of necessary management measures. However, it is important to use robust data, like assessments, when they are available. Thus, we offer language encouraging consideration of the uncertainty of the methods as well as the benefits of decreasing lag time to encourage adoption of fast, yet accurate, determinations.

Highlighted recommendations:

Please see the blueline in the appendix of this document for our complete recommendations. We excerpt sections here for additional discussion.

§600.310(e)(2)(ii)(A) – As noted in the above discussion, we recommend the agency remove subparagraph (3) and correlating language in the rest of the PR. In addition, we recommend the inclusion of additional guidance for how to choose between the established methods of determining the overfishing status.

~~(A) SDC to determine overfishing status. Each FMP must describe which of the following two methods will be used for each stock or stock complex to determine an overfishing status. Each FMP must describe the method used to determine the overfishing status for each stock or stock complex. Councils should select a method that is robust to management and scientific uncertainty for that stock or stock complex, and should minimize lag time between the end of a fishing season and a determination of status. For domestically-managed stocks or stock complexes, one of the following methods should be used:~~

~~(1) Fishing Mortality Rate Exceeds MFMT. Exceeding the MFMT for a period of 1 year or more exceeding a multi-year mortality reference point more constitutes overfishing. The MFMT or reasonable proxy may be expressed either as a single number (a fishing mortality rate or F value), or as a function of spawning biomass or other measure of reproductive potential.~~

~~(2) Catch Exceeds the OFL. Should the annual catch exceed Exceeding the annual OFL for 1 year or more, the stock or stock complex is considered subject to exceeding a multi-year catch reference point more constitutes overfishing.~~

⁷⁰ 74 Fed. Reg. at 3188.

~~(3) Use of Multi-Year Periods to Determine Overfishing Status. A multi-year period may not exceed three years. A Council may develop overfishing SDCs that use a multi-year approach, so long as it provides a comprehensive analysis based on the best scientific information available that supports that the approach will not jeopardize the capacity of the fishery to produce MSY on a continuing basis. A Council should identify in its FMP or FMP amendment circumstances in which the multi-year approach should not be used (e.g., because the capacity of the stock to produce MSY over the longer term could be jeopardized).~~

§600.310(e)(2)(i) – We recommend restoring “annual” language to the definitions of overfishing and maximum fishing mortality threshold (MFMT)

§600.310(e)(2)(ii) – We recommend restoring annual consideration of overfishing.

3.2 - The PR minimizes the role of Scientific and Statistical Committees (SSCs) in setting acceptable biological catch (ABC) and ABC control rules, and reduces buffers for preventing overfishing.

Several changes in the PR to §600.310(f) would weaken the implementation of ABC and ABC control rules. As we discussed in section 1.2 of this document, the PR appears to limit the involvement of the SSC in setting acceptable biological catches (ABCs) and ABC control rules. The proposed rule states that control rules are “established by the Council *in consultation* with its SSC,”⁷¹ and deletes existing language clearly stating that “the SSC must recommend the ABC to the Council”⁷² and requiring the ABC control rule be “based on scientific advice from its SSC.”⁷³ These changes minimize the role of the SSC and science in the catch limit setting process, and threaten to weaken the requirement that Councils cannot exceed the SSC’s fishing level recommendations. We recommend restoring this language and adding additional plain language guidance on the role of the SSC and the relationship of the ABC to other parts of the ACL framework.

The PR makes the importance of a Council’s risk policy in establishing the ABC more clear, which is a positive step. Risk policies are important, as they allow Councils to consider, in collaboration with their SSCs, the relative benefits of being more or less risk averse. The agency should consider more strongly encouraging the use of risk policies, and provide technical guidance to Councils on what to consider in a risk policy. Factors like the life histories and vulnerabilities of stocks should be weighed, along with the benefits of preventing devastating economic consequences to fishing communities should management not be sufficiently precautionary. In many situations, additional risk avoidance is a good idea, such as in the case of protecting forage fish, which serve as prey to many predators targeted by directed fisheries and should be managed at higher levels. Risk policies can also be considered when choosing appropriate accountability measures (AMs). We recommend the agency prepare technical guidance on the development and use of risk policies as some Councils still struggle with balancing risk and desirable catch levels.

However, some aspects of the agency’s PR on risk policy remain troubling. The PR weakens the acceptable probability of preventing overfishing in the risk policy, replacing language stating the “probability that overfishing will occur cannot exceed 50 percent and should be a lower value” with language saying the probability that catch equal to the ABC will not result in overfishing should be “at

⁷¹ 80 Fed. Reg. at 2806; proposed rule at 50 C.F.R. § 600.310 (f)(1)(iv) (emphasis added).

⁷² NOAA Fisheries “Red-line document,” p 15.

⁷³ NOAA Fisheries “Red-line document,” p 15.

least 50 percent.”⁷⁴ This is a significant and troubling change. In *NRDC v Daley*, the D.C. Circuit Court of Appeals found: “For government to meet its statutory and regulatory mandate in setting fishing quotas pursuant to Magnuson–Stevens Fishery Conservation and Management Act, government must have fairly high level of confidence that quota it recommends will not result in fishing mortality rate (F) greater than target F, which means, at the very least, that total allowable landings (TAL) chosen by government must have at least a 50% chance of attaining the target F.”⁷⁵ The agency is inappropriately interpreting this direction to make 50% the recommendation for the probability that catch at the ABC level will result in overfishing, not the absolute lowest limit, as was clearly intended by the court.

The PR misses an opportunity to strengthen guidance directing Councils to manage stocks in a precautionary manner when biomass is declining. Harvest control rules that promptly but gradually reduce fishing mortality as stock size decreases below the biomass that produces maximum sustainable yield (Bmsy) are an important tool for lowering the likelihood that stocks will become overfished, and can also provide a path to rebuilding.⁷⁶ We suggest stronger language that makes it clear that ABC control rules should lower fishing mortality as stock size declines, not that it should just be considered. This is a key technique for precautionary management, and should be a cornerstone of sustainable management in the United States.

In summary, the agency should more clearly define risk policy and strengthen its guidance on the precautionary levels necessary when setting the ABC. Further, clear descriptions on the role of the SSC and the relationship between ABC and the ACL framework should be added or restored.

Highlighted recommendations:

Please see the blueline in the appendix of this document for our complete recommendations. We excerpt sections here for additional discussion.

§600.310(f)(1) – We recommend the agency add language clarifying the definitions of ABC and scientific uncertainty. We strongly recommend the addition of risk policy to the definitions section. Further, the agency should strengthen the guidance on acceptable probabilities of exceeding the OFL in order to comply with the findings of the court.

(1)(2) Definitions.

(ii) *Acceptable biological catch (ABC)* is a level of a stock or stock complex's annual catch, which cannot exceed the OFL (see see paragraph (e)(2)(i)(D) of this section). The ABC which is based on an ABC control rule that accounts for the scientific uncertainty in the estimate of OFL and, any other scientific uncertainty (see paragraph (f)(3) of this section), and should be specified based on the ABC control rule, and the Council's risk policy.

...

(vi) *Risk policy* is a policy created by the Council in collaboration with its SSC that describes an acceptable probability (significantly greater than 50 percent), that catch equal to the stock's ABC will not result in overfishing. Other appropriate methods can be used to define a risk policy as long as they yield similarly risk-averse results. A risk policy should consider the vulnerability of

⁷⁴ NOAA Fisheries “Red-line document,” 600.310(f)(2) proposed, p 14 (removed language on p 15, in struck section (f)(4)).

⁷⁵ *NRDC v. Daley*, 209 F. 3d 747 (D.C. Cir. 2000).

⁷⁶ National Research Council. “Evaluating the effectiveness of fish stock rebuilding plans in the United States.” (2013).

the stock or stock complex (see 310(b)(4)) as well as the economic, social, and ecological consequences between being more or less risk adverse.

(vii) *Scientific uncertainty* refers to uncertainty in the information about a stock and its reference points. Sources of scientific uncertainty could include: uncertainty in stock assessment results; uncertainty in the estimates of MFMT, MSST, the biomass of the stock, and OFL; time lags in updating assessments; the degree of retrospective revision of assessment results; uncertainty in projections; uncertainties due to the choice of assessment model; longer-term uncertainties due to potential ecosystem and environmental effects; or other factors. Each Council must account for scientific uncertainty in control rules, based on recommendations from its SSCs.

§600.310(f)(2) – We recommend that the existing role of the SSC in recommending ABCs should be restored, as well as the consideration of all sources of scientific uncertainty, not just those directly related to the OFL, when creating an ABC control rule. We recommend moving consideration of risk into the risk policy definition in §600.310(f)(1). We also recommend that relevant uncertainties should be described, add plain-language descriptions of the relationships between ABC, ACL, and OFL, and strengthen the direction to reduce fishing mortality as stock size declines..

(2) ABC control rule.—

(i) For stocks and stock complexes required to have an ABC, each Council must establish an ABC control rule, based on the scientific advice from its SSC, that accounts for scientific uncertainty in the OFL, any other scientific uncertainty, and the Council's risk policy. ~~The Council's risk policy could be based, on an acceptable probability (at least 50 percent) that catch equal to the stock's ABC will not result in overfishing, but other appropriate methods can be used. When determining the risk policy, Councils could consider the economic, social, and ecological trade-offs between being more or less risk averse. The Council's choice of a risk policy cannot result in an ABC that exceeds the OFL.~~ The process of establishing an ABC control rule must be based on scientific advice from the SSC ~~may also involve science advisors or the peer review process established under Magnuson-Stevens Act section 302(g)(1)(E).~~ SSC or peer review recommendations should describe relevant uncertainties quantitatively, or if that is not possible, qualitatively. The ACL (which is set by the Council) cannot be greater than the ABC (which is set by the SSC). The ABC cannot be greater than the OFL.

(ii) The ABC control rule must articulate how ABC will be set compared to the OFL based on the scientific knowledge about the stock or stock complex and taking into account scientific uncertainty (see paragraph (f)(1)(vi) of this section).

The ABC control rule should be designed so that fishing mortality is reduced ~~consider reducing fishing mortality~~ as stock size declines below B_{msy} and as scientific uncertainty increases, and may establish a stock abundance level below which directed fishing would not be allowed. When ~~the~~ scientific uncertainty cannot be directly calculated, such as when proxies are used, then a proxy for the uncertainty itself should be established based on the best scientific information, including comparison to other stocks. The control rule may be used in a tiered approach to address different levels of scientific uncertainty.

§600.310(f)(3) – We recommend inclusion of language clearly stating that the SSC must recommend the ABC to the Council, along with additional plain language describing the relationship between the ABC and the OFL.

3.3 - The PR may increase the risk of overfishing by allowing phase-in of ABC limits, delaying the implementation of sustainable catch limits in cases where new information suggests the health of the fish population has changed.

The PR would allow Councils to delay responses to new stock assessments by phasing-in increases or decreases in catch over a three-year period.⁷⁷ Phasing-in allowable biological catch (ABC) through the Councils' control rules could increase the risk of overfishing, particularly in situations with highly uncertain catch information or infrequent assessment updates. Without additional safeguards that account for the high levels of uncertainty associated with many fish stocks, efforts to end overfishing could be compromised.

ABCs are intended to provide a buffer from the OFL to account for scientific uncertainty, and should provide a reasonable probability that the OFL should not be exceeded. As noted in the previous section, the court was clear in NRDC v. Daley that the minimum probability allowed is 50%, but that in order to comply with the Magnuson-Stevens Act, those probabilities should be higher.⁷⁸ The proposed guidelines also state, "while the ABC is allowed to equal OFL, NMFS expects that in most cases ABC will be reduced from OFL to reduce the probability that overfishing might occur in a year."⁷⁹ Yet the agency's own hypothetical example explaining how Councils could use this methodology sets the ABC right at the OFL in the first year of a phase-in.⁸⁰

While the agency requires a comprehensive analysis for how such a rule can and cannot be used, and how it prevents overfishing, no guidance is given for what should be analyzed and what situations would make this strategy inappropriate. Further, nothing prevents Councils from setting the ABC right at or very near the overfishing limit (OFL) for two full years before implementing the full necessary decrease indicated by a stock assessment. The PR provides no guidance for the rate at which phase-in can occur – explanations of "slow-up/full-down" policies or percentage-limited annual variability methods occur only in the preamble text of the proposed rule and are not incorporated into the proposed guidelines.⁸¹

Phasing-in needed changes to catch limits is particularly risky in fisheries in which ACLs are set equal to ABCs or in situations where an ABC phase-in would result in a reduced buffer (or no buffer at all) between the overfishing limit (OFL) and ABC. In many cases, buffers produced by the ABC control rules are already relatively small (*e.g.*, Gulf red snapper 8-12% over the next three years⁸²). Without advice about acceptable rates of phase-in, Councils will be vulnerable to political pressure forcing two possibilities: front-loading high catch levels in the first year when increases are appropriate; or, delaying a full two years without taking any real action to lower the ABC when decreases are necessary. These actions make phase-in very risky and defeat the fundamental purpose of the NS1 guidelines and a top objective of the Magnuson-Stevens Act: to prevent overfishing. A slow phase-in of needed reductions would increase uncertainty in the health of the stock and could undermine the recovery of stocks that are already overfished or at risk of becoming overfished.

⁷⁷ NOAA Fisheries "Red-line document," 600.310(f)(2)(ii), p 19.

⁷⁸ NRDC v. Daley, 209 F. 3d 747 (D.C. Cir. 2000).

⁷⁹ NOAA Fisheries "Red-line document," 600.310(f)(3), p 15.

⁸⁰ NOAA Fisheries. Presentation: "Proposed Revisions to the Magnuson-Stevens Act National Standard 1, 3, and 7 Guidelines." April 27, 2015. (2015) at 25.

⁸¹ 80 Fed. Reg. at 2794.

⁸² Standing, Special Reef Fish and Special Mackerel SSC January 6-8, 2015 Meeting Summary, Tampa, Florida. Tab B-4, Gulf Council Briefing Book, Table 3, pg 7.

For instance, the Gulf of Mexico Fishery Management Council took immediate action in 2010 on gag when an assessment showed the population was overfished and overfishing was occurring.⁸³ By taking the necessary action at the outset, fishing mortality was significantly reduced during a time of increased recruitment, so the stock recovered quickly, as indicated by the most recent stock assessment.⁸⁴ Had the Council slowly phased-in the ABC reductions instead, that opportunity may have been lost, and gag could still be under a rebuilding plan.

Similarly, in the South Atlantic region, the 2013 blueline tilefish assessment indicated that the then-current ABC was nearly three times higher than the revised MSY estimate from the new stock assessment, requiring the implementation of emergency measures in April 2014 to reduce the ABC and ACL sharply in order to prevent severe overfishing.⁸⁵ Phasing in the new ABC for blueline tilefish would have increased the risk of continued overfishing and could have caused more severe depletion of the stock.

It is inappropriate to increase the risk of overfishing in order to, as the agency says in the preamble for this section, provide more stability to fishing participants.⁸⁶ A phase-in may be appropriate in situations where there is low uncertainty in catch levels and biomass assessments, but only if adequate uncertainty buffers between OFL, ABC and ACL are maintained, and if accountability measures (AMs) prevent and address any ACL overages that may occur. However, we believe that the three-year phase-ins of ABC control rules (as currently proposed) will drastically weaken the necessary response to new data on fish population health by drawing out the timeline and process of setting sustainable catch levels based on new scientific information. This time-extending loophole would be particularly problematic in situations where uncertainties in the data lead to the stock being in worse shape than is conclusively understood.

Managers should not take management actions that increase the risk of allowing overfishing. Phase-in, as described in the PR, is contrary to the Magnuson-Stevens Act Section 303(a)(15), which states that annual catch limits should be set at levels that prevent overfishing.⁸⁷ Should the agency wish to promote the use of phase-in, the appropriate mechanism is not the ABC control rule, but in an annual ACL specification process that factors key fishery indicator data at a minimum. Managers could phase-in ACL increases or decreases, but still maintain the buffer from the OFL for scientific uncertainty which is provided by the ABC. Phase-ins done through the ACL, provided effective AMs address any overages, would be less likely to increase the risk of overfishing, but would still provide the less variable management response desired by the agency. ***Thus, the agency should move the implementation of phase-in from the ABC control rule and to the ACL setting process and include sufficient safeguards, such as AMs, to avoid increasing the risk of overfishing.***

⁸³ SEDAR 10 Update Assessment. 2009. Stock Assessment of Gag in the Gulf of Mexico. Report of Assessment Workshop, Miami, Florida, March 30-April 2, 2009. 171 pp. <http://sedarweb.org/sedar-10>

⁸⁴ SEDAR 33. 2014. Stock assessment report Gulf of Mexico gag. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://sedarweb.org/sedar-33>

⁸⁵ SEDAR 32. 2013, Stock Assessment Report for South Atlantic Blueline Tilefish. North Charleston, South Carolina. <http://sedarweb.org/sedar-32>.

⁸⁶ 80 Fed. Reg. at 2794.

⁸⁷ 16 U.S.C. § 1853(a)(15).

Highlighted recommendations:

Please see the blueline in the appendix of this document for our complete recommendations. We excerpt sections here for additional discussion.

§600.310(f)(2)(ii) – We recommend removing all new text referring to the use of phase-in ABC control rules, including all of subsection (A).

§600.310(f)(4) – We recommend adding a new section which describes the use of phase-in at the ACL level. We have additionally modified the language originally suggested by the agency in describing this technique, as it inappropriately and inaccurately described phase-in as useful only for reducing short-term negative effects on the fishery. Phase-in of increases in catch can be an effective way to manage fisheries with precaution, and the text as written in the PR could be interpreted to advocate for the use of phase-in only when decreases in catch are necessary.

(iv) Phase-in ACLs. Incrementing changes to catch limits in response to new scientific information can smooth management response to increases or decreases in stock status. To help stabilize catch levels as stock assessments are updated, a Council may choose to phase-in changes to ACLs over a period of time, not to exceed 3 years, as long as overfishing is prevented, based on advice from their SSC. The Council must provide a comprehensive analysis and articulate within their FMP when phase-in can and cannot be used and how overfishing will be prevented. Phase-in cannot be used for stocks that are overfished or subject to overfishing.

3.4 - The PR allows carryover of unused quota without sufficient guidance to prevent overfishing.

The PR would allow carryover of uncaught quota from one fishing season to the next by allowing ABCs to be revised. However, there is again insufficient guidance to ensure this does not increase the risk of overfishing and compromise the progress made in sustainably managing our fisheries. The PR presumes that any uncaught quota is immediately available for catch in the subsequent year, and encourages Councils to consider carrying over the full amount, even if ABC levels must be reset to accommodate such a large increase in quota. The agency’s presentations regarding the use of this carryover make only minor reductions in the amount of carryover for natural mortality rates, but no other factors are considered.⁸⁸

This proposed action is extremely risky. SSCs would be allowing for increases in ABC without access to or review of new data describing the actual health of the stock, and without adequate consideration of uncertainty. Thorough scientific review of any proposed carry-over of uncaught quota from the previous year is essential to ensure that the risk of overfishing is not increased. This review should examine key inputs such as recruitment, biomass, and fishing mortality rate. Without this sort of analysis, it is impossible to know whether an underage in landings occurred because of a lack of effort or because there are fewer fish available than predicted. For instance, it would be highly inappropriate to carry over “unused” quota when there is an episodic environmental or mortality event (*e.g.*, oil spill, red tide, cold kill, or disease outbreak). Similarly, understanding why an underage occurs is an important matter that could signal trouble in the fish population(s) where ratcheting up catch limits would be a risky action to take.

⁸⁸ NOAA Fisheries. Presentation: “Proposed Revisions to the Magnuson-Stevens Act National Standard 1, 3, and 7 Guidelines.” April 27, 2015. (2015) at 26.

Management uncertainty must also be considered before allowing for any carryover. The risk of overfishing due to a carryover is increased in fisheries with low monitoring levels or no assessments, as the data in these fisheries is less certain. This makes the proposal for carrying over unused catch via ABC control rules especially concerning in areas, such as the Southeast regions, where annual stock assessment updates are not generally available in most fisheries, and catch limits are often simply based on historical landings, which are typically highly uncertain. In general, the use of carry-overs of unused quota from one year to the next should be avoided unless an effective catch monitoring program is in place, strong accountability measures exist, and the fishery's management and scientific uncertainty is very low.

Carryover provisions have been useful to address safety-at-sea issues in catch share programs, so as to prevent racing at the end of a season to fill an allocation.⁸⁹ These fisheries typically only carryover small amounts and have effective enforcement and monitoring systems. It is inappropriate to extend this methodology, without limit on the amount of carryover, consideration for why the underage occurred, or requirements for acceptable ranges of uncertainty, to any fishery that may wish to use it.

There are examples from around the country of situations where carryover could be risky. In New England, despite strict limits on catch, fishermen have failed to meet their quota for cod for several consecutive fishing seasons (2011-2013).⁹⁰ This is a strong indicator that the fish stock has dramatically declined and even more must be done if the fish are to recover. It can be presumed that the New England Fishery Management Council would be likely to try to use carryover in this fishery, as its previous attempts to do so were rejected by the court for allowing ACLs to be set higher than ABCs.⁹¹ Obviously, with a stock that is at historic low population levels, carrying over unused quota would increase the risk of exacerbating the stock's condition and delay the ultimate rebuilding of the stock. Allowing Councils to raise the ABC to allow carryover and avoid the findings of the court is inappropriate.⁹²

In the Gulf of Mexico last year, the recreational sector caught only about 50% of its gag quota, while the commercial sector only caught about 70%.⁹³ The PR would allow all of the underage to be rolled over since it includes no limit on the carryover. This could be very problematic as there are strong indications, including fishermen testimony and in the most recent analysis, that the gag population is not as healthy as deemed in the most recent assessment.⁹⁴

Allowing the carry-over of any amount of unused ACL(s) in instances with significant scientific and management uncertainty, and without understanding the reason for the underage, greatly increases the risk of overfishing and should be avoided, particularly for populations at low levels.

It is inappropriate to allow ABCs to be adjusted in the absence of consideration of the best scientific information available regarding the health of the stock. Instead, carryover could occur at the ACL level.

⁸⁹ 80 Fed. Reg. at 2794.

⁹⁰ The Pew Charitable Trusts. Risky Decisions: How denial and delay brought disaster to New England's historic fishing grounds. (2015). <http://www.pewtrusts.org/~media/Assets/2014/09/Risky-Decisions.pdf>.

⁹¹ *Conservation Law Foundation v. Evans*, 209 F. Supp. 2d 1, 14 (D.D.C. 2001).

⁹² 80 Fed. Reg. at 2794.

⁹³ NOAA Fisheries, Southeast Regional Office, ACL Monitoring website, http://sero.nmfs.noaa.gov/sustainable_fisheries/acl_monitoring/index.html accessed on June 16, 2015.

⁹⁴ SEDAR 33. 2014. Stock assessment report Gulf of Mexico gag. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://sedarweb.org/sedar-33>.

As carryover could not exceed the ABC, sufficient caps would be in place to prevent significantly increasing the risk of overfishing. Councils interested in using a carryover could consider the level of management uncertainty in the fishery and adjust within the management uncertainty buffer between the ACL and ABC (or between the ACL and annual catch target if used). However, this should not be allowed for stocks that are overfished or experiencing overfishing. ***Thus, the agency should move the implementation of carryover from the ABC control rule to the ACL setting process.***

Highlighted recommendations:

Please see the blueline in the appendix of this document for our complete recommendations. We excerpt sections here for additional discussion.

§600.310(f)(2)(ii) – We recommend removing all new text referring to the use of carry-over ABC control rules, including all of subsection (B).

§600.310(f)(4) – We recommend adding a new section which describes the use of phase-in at the ACL level. In order to use this technique, Councils should determine why the underage occurred, cannot set the ACL above the ABC, and cannot allow overfishing. Further, phase-in should not be used on stocks which are overfished or subject to overfishing.

(v) Carry-over ACLs. Councils may choose to carry-over some of the unused portion of the ACL from one year to increase the ACL for the next year, so long as the ACL increase does not exceed the ABC and the stock is not overfished or subject to overfishing. Councils must evaluate whether unused ACL was due to low effort, due to lack of availability of fish due to lower than expected populations, or some other situation, based on advice from their SSC. The resulting ACL must consider scientific and management uncertainty and must prevent overfishing. The Council must provide a comprehensive analysis and articulate, within the FMP, when carry-over can and cannot be used and how overfishing will be prevented.

3.5 – The PR would allow grouping of healthy and unhealthy stocks together for management purposes, increasing the risk of chronic overfishing on weaker stocks.

The PR suggests several changes related to stock complexes, indicator species, and consideration of maximum sustainable yield (MSY) for a fishery as a whole that would let managers combine dissimilar fish populations and manage them jointly, without considering the health of individual populations. When managers know that a population is subject or vulnerable to overfishing, they must prevent unsustainable catch of those species. While some aspects of these proposed changes are positive, others would instead increase the risk of overfishing on these populations.

First, the PR adds “practicability” language to the definition and descriptions of stock complexes, which would weaken the standard for what groups of stocks could be considered a complex. The agency suggests the current definition “limits the applicability of stock complexes in many of the circumstances in which they may be most useful, such as situations where stocks in a multispecies fishery cannot be targeted independent of one another, or when it is not feasible for fishermen to distinguish individual stocks among their catch.”⁹⁵ But these situations are already directly addressed and permitted in the current guidance: “Stocks may be grouped into complexes for various reasons, including where stocks in a multispecies fishery cannot be targeted independent of one another... or when it is not feasible for

⁹⁵ 80 Fed. Reg. at 2790.

fishermen to distinguish individual stocks among their catch.”⁹⁶ As this is already clearly addressed in the guidelines, and many regions around the country are using stock complexes already, the agency has failed to make its case for the necessity of weakening the definition of stock complexes. If regions are unevenly applying the current guidelines, that is appropriately addressed at the regional level through advice and consultation with the agency – not by lowering the bar for all regions. The agency should strike the proposed weakening language for complexes, as it opens up loopholes to allow wildly dissimilar stocks to be grouped together, and could allow intentional avoidance of managing “choke” stocks – stocks with low populations levels that are caught in a mixed fishery which, should fishing selectivity not sufficiently avoid catch of these species, can cause the closure of a fishery to avoid overfishing these weaker stocks.

In order to address the issues of overfishing occurring on stocks in a stock complex, the agency is encouraging the use of indicator stocks in stock complexes.⁹⁷ We agree that indicator stocks can be a useful tool for managing some stock complexes if they are chosen and managed correctly. However, unless indicator stocks are representative of the most vulnerable stocks in the assemblage, the use of indicator species and stock complexes (as opposed to direct management of each species) can increase the risk of overfishing because depletion of individual non-indicator species in the complex may go undetected. It is not possible to exploit all species in an assemblage at their optimum level simultaneously because the fishery most often cannot selectively target more abundant, more productive members of the assemblage while also avoiding less abundant, less productive species.

The success of management using indicator stocks relies on which stock is chosen as the indicator. The proposed rule offers some guidance as to what species in the assemblage should be used as the indicator by stating that the indicator stock “should be representative of the typical vulnerability of stocks within the complex.”⁹⁸ If the stocks in a complex have a wide range of vulnerability, it continues, “they should be reorganized into different stock complexes that have similar vulnerabilities; otherwise the indicator stock should be chosen to represent the more vulnerable stocks within the complex.”⁹⁹ However, some language in the PR weakens the guidance on indicator species – Councils only “should,” instead of “must” choose indicators that are the most vulnerable. And while we appreciate the guidance that “Councils should review the available quantitative or qualitative information (*e.g.*, catch trends, changes in vulnerability, fish health indices) of stocks within a complex on a regular basis to determine if they are being sustainably managed,”¹⁰⁰ this will not be sufficient to prevent the use of this section to allow undetected harm to poorly monitored, vulnerable species within a stock complex. We offer strengthening language, discussed below.

Finally, the PR suggests the use of aggregate MSY for an entire fishery.¹⁰¹ This suggestion is intended to insert ecosystem-based fishery management (EBFM) considerations into the management of species. While we support the intent of this section, and the use of procedures, such as “using models that account for multi-species interactions, composite properties for a group of similar species, common

⁹⁶ Existing NS1 guidance. § 600.310(d)(8)

http://www.nmfs.noaa.gov/sfa/laws_policies/national_standards/documents/national_standard_1_cfr.pdf

⁹⁷ 80 Fed. Reg. at 2790.

⁹⁸ NOAA Fisheries “Red-line document,” § 600.310(d)(2)(ii)(C), p 7.

⁹⁹ *Id.*

¹⁰⁰ NOAA Fisheries “Red-line document,” § 600.310(d)(2)(ii)(A), p 7.

¹⁰¹ 80 Fed. Reg. at 2790.

biomass (energy) flow and production patterns,”¹⁰² we believe there are better ways to support the expansion of EBFM in the PR that contain less risk of overfishing.

The recent research on aggregate MSY shows that these values are often ~25% less than the sum of individual MSYs, meaning aggregate MSY should serve as a precautionary cap on exploitation of a fishery.¹⁰³ But this study also notes that “simulation testing of the performance of full multispecies models (Worm *et al.* 2009) and aggregate production models (Gaichas *et al.* 2012) clearly indicate that the vulnerability of weak-link stocks must be carefully considered prior to the application of any aggregate reference points.”¹⁰⁴ If species groups are constructed without considering individual life histories and productivities, interactions among species such as predator-prey dynamics, and environmental influences, aggregate or full-system MSY may lead to overfishing.¹⁰⁵ Evaluations of existing model estimates indicate that the level of fishing mortality corresponding to an aggregate MSY can result in severe depletion of as many as 40% of stocks within the complex.¹⁰⁶

These studies make it clear that managers would need to actively apportion the aggregate MSY to protect vulnerable species and prevent targeted overfishing of valuable species. But as one study suggests, managers may have a preference over other approaches – like ones that maximize profit.¹⁰⁷

The PR takes none of these risks into account when proposing the use of aggregate MSYs. It is devoid of details, and offers no cautions on the appropriate use of such techniques while still preventing overfishing of individual stocks. Nor does the proposed guidance address the uncertainties associated with the use of these techniques. While it is possible that biological reference points such as MSY for aggregate species assemblages may be a useful way of setting upper constraints on removals, the proposed guidance fails to include appropriate precautions. We contend that the discussion on the use of these techniques is better suited for technical guidance from the agency than for inclusion in the NS1 guidelines. Without specific direction for what safeguards must be in place if aggregate MSY is used, this could easily be applied in a way to allow overfishing on vulnerable or choke stocks.

Finally, the Magnuson-Stevens Act is clear in its requirement that FMPs or regulations must prevent overfishing. In addition to NS1, which has required fishery conservation and management measures to prevent overfishing since 1976, the act includes a clear mandate for FMPs to develop catch limits that do not allow overfishing to occur. Yet, the agency has chosen to retain §600.310(m) - Exceptions to the requirements to prevent overfishing. Despite the agency’s effort to limit this loophole (the mixed stock exception) in the previous update to these guidelines, the provision is still in patent violation of the Magnuson-Stevens Act’s mandate to prevent overfishing. The Magnuson-Stevens Act does not provide for any exceptions to the prohibition on overfishing; this illegal provision must be struck from the rule.

¹⁰² NOAA Fisheries “Red-line document,” § 600.310(e)(1)(iv), p 8.

¹⁰³ Fogarty, M. J., Overholtz, W. J., and Link, J. S. “Aggregate surplus production models for demersal fishery resources in the Gulf of Maine.” (2012) *Marine Ecology Progress Series*. 459:247-258. DOI: 10.3354/meps09789.

¹⁰⁴ *Id.*

¹⁰⁵ Link, Jason S. et. al. “Synthesizing lessons learned from comparing fisheries production in 13 northern hemispheres ecosystems: emergent fundamental features.”(2012) *Marine Ecology Progress Series*. 459:293-302. DOI: 10.3354/meps09829.

¹⁰⁶ Gaichas, Sarah, et al. “Assembly rules for aggregate-species production models: simulations in support of management strategy evaluation.” (2012) *Marine Ecology Progress Series*. 459:275-292. DOI: 10.3354/meps09650.

¹⁰⁷ Fogarty, M. J., Overholtz, W. J., and Link, J. S. (2012).

In summary, the agency must ensure the risks to the most vulnerable stocks in a complex or fishery do not go undetected and unaddressed. ***Thus, weakening language should be removed from the stock complex section, indicator stocks should be strengthened to clarify that they should be representative of the most vulnerable species in the complex, and the use of aggregate MSY should be removed until such time as adequate guidance is available on how to use it in a management context without increasing the risk of overfishing. In addition, the agency should remove the mixed stock exception, as it is contrary to the law.***

Highlighted recommendations:

Please see the blueline in the appendix of this document for our complete recommendations. We excerpt sections here for additional discussion.

§600.305(d)(3) – As described above, we recommend that “practicability” language should be removed from the definition of stock complexes, as it is an unnecessary and unjustified weakening of the guidelines that will open the door to abuse of this section. Additionally, we recommend adding language that requires a comprehensive analysis of how overfishing will be prevented if stock complexes are used.

Further, the indicators species section should be strengthened to demonstrate that indicators must be representative of the most vulnerable species in the complex, and, where scientific uncertainty exists, additional precaution should be used in managing these species, in consultation with the SSC.

(32) Stock complex. Stocks that require conservation and management can be grouped into stock complexes. A “stock complex” is a tool to manage a group of stocks within a FMP.

(i) At the time a stock complex is established, the FMP should provide, ~~to the extent practicable,~~ a full and explicit description of the proportional composition of each stock in the stock complex, ~~to the extent possible.~~ Stocks may be grouped into complexes for various reasons, including where stocks in a multispecies fishery cannot be targeted independent of one another ~~and MSY cannot be defined on a stock-by-stock basis (see paragraph (e)(1)(iii) of this section);~~ where there is insufficient data to measure ~~their~~ a stock’s status relative to SDC; or when it is not feasible for fishermen to distinguish individual stocks among their catch. ~~Where practicable,~~ ~~€~~ **The group of stocks should have a similar geographic distribution, life history characteristics, and vulnerabilities to fishing pressure such that the impact of management actions on the stocks is similar.** The vulnerability of individual stocks ~~to the fishery~~ should be ~~evaluated~~ **considered, based on the best scientific information available,** when determining if a particular stock complex should be established or reorganized, or if a particular stock should be included in a complex. ~~Stock complexes may be comprised of: one or more indicator stocks, each of which has SDC and ACLs, and several other stocks; several stocks without an indicator stock, with SDC and an ACL for the complex as a whole; or one of more indicator stocks, each of which has SDC and management objectives, with an ACL for the complex as a whole (this situation might be applicable to some salmon species).~~ **Councils must provide a comprehensive analysis and demonstrate within their FMP how overfishing will be prevented if stock complexes are used.**

(9) ii) Indicator stocks.

(A) An indicator stock is a stock with measurable **and objective** SDC that can be used to help manage and evaluate more poorly known stocks that are in a stock complex.

(B) ~~Where practicable,~~ **Stock complexes should include one or more indicator stocks (each of which has SDC and ACLs).** Otherwise, stock complexes may be comprised of: several stocks without an indicator stock (with SDC and an ACL for the complex as a

whole), providing that Councils work with their SSCs to identify indicator stocks as soon as possible, or one or more indicator stocks (each of which has SDC and management objectives) with an ACL for the complex as a whole (this situation might be applicable to some salmon species). Councils, ~~should~~ in consultation with their SSCs, must review the available quantitative or qualitative information (e.g., catch trends, changes in vulnerability, fish health indices, etc.) of stocks within a complex on a regular basis to determine if they are being sustainably managed, whether stocks in the complex have similar vulnerabilities, and to ensure that overfishing of stocks within the complex is prevented.

(C) If an indicator stock is used to evaluate the status of a complex, it ~~should~~ must be representative of the ~~typical status/vulnerability of each stock~~ most vulnerable stocks within the complex, ~~due to similarity in vulnerability~~. If the stocks within a stock complex have a wide range of vulnerability, they should be reorganized into different stock complexes that have similar vulnerabilities; ~~otherwise the indicator stock should be chosen to represent the more vulnerable stocks within the complex~~. In instances where the vulnerability of stocks in a complex is subject to scientific uncertainty, ~~an indicator stock is less vulnerable than other members of the complex~~, management measures ~~need to~~ ~~should~~ must be more conservative so that the more vulnerable members of the complex are not at risk from the fishery.

(D) More than one indicator stock can be selected to provide more information about the status of the complex. ~~When indicator stock(s) are used, periodic re-evaluation of available quantitative or qualitative information (e.g., catch trends, changes in vulnerability, fish health indices, etc.) is needed to determine whether a stock is subject to overfishing, or is approaching (or in) an overfished condition.~~

(E) When indicator stocks are used, the stock complex's MSY could be listed as "unknown," while noting that the complex is managed on the basis of one or more indicator stocks that do have known stock-specific MSYs, or suitable proxies, as described in paragraph (e)(1)(iv) of this section.

§600.310(e)(1)(iv) – We recommend that the language describing MSY for stock complexes be restored.

§600.310(e)(1)(iv) – We recommend that aggregate MSY language should be removed.

§600.310(e)(3)(iv)(C) – We recommend that aggregate MSY language should be removed.

§600.310(m) – We recommend that the section "Exceptions to requirements to prevent overfishing" should be removed.

3.6 - The PR would allow fishing to continue on stocks with an annual catch limit (ACL) of zero, contrary to the bycatch requirements in the law and NS9.

The proposed rule would weaken the Magnuson-Stevens Act's mandates regarding accountability measures (AMs) and bycatch. The proposed rule states that "if an ACL is set equal to zero and the AM for the fishery is a closure that prohibits fishing for a stock, additional AMs are not required if only small amounts of catch or bycatch occur, and the catch or bycatch is unlikely to result in overfishing."¹⁰⁸ The agency explains "that a closure that prohibits fishing for a stock is an adequate AM for a fishery, and in

¹⁰⁸ NOAA Fisheries "Red-line document," § 600.310(g)(3), p 17.

some cases, it may be the only option available for a Council.”¹⁰⁹ We agree that a closure (*i.e.*, an ACL of zero) is a proper AM, and agree that it may be the only AM in some situations. However, NOAA Fisheries cannot exempt stocks with an ACL of zero from NS9 and from the accountability measures and catch accounting requirements.

In 2006, Congress reinforced the Magnuson-Stevens Act’s catch accounting directive by requiring that each fishery management plan “establish a mechanism for specifying annual catch limits . . . including measures to ensure accountability.”¹¹⁰ An annual catch limit (ACL) is comprised of two parts: (1) the permissible ACL for each stock, and (2) AMs which ensure that the ACL is not exceeded or that exceedances are mitigated or corrected.¹¹¹ As interpreted by the NS1 Guidelines (existing and proposed), ACLs and AMs must account for “the total quantity of fish . . . taken in commercial, recreational, subsistence, tribal, and other fisheries . . . *as well as mortality of fish that are discarded* (emphasis added).”¹¹² NS9 requires “[c]onservation and management measures [that], to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.”¹¹³ And 16 U.S.C. § 1853(a)(11) requires “a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery.”

The agency’s NS1 proposal is in contravention with these requirements because it could be interpreted to exempt fisheries with an ACL of zero from the AM requirement by explicitly allowing additional catch and bycatch to exceed the ACL, and by not requiring those fisheries to minimize bycatch or to assess the amount and type of bycatch. An AM must sufficiently “ensure accountability” with its respective total ACL, regardless of whether that ACL is zero. All sources of mortality must be considered. This includes, but is not limited to, directed catch, bycatch, incidental catch, scientific research catch, and discards. While an ACL of zero prohibits directed catch, it does not ensure accountability because it does not prohibit, limit, or account for other sources of mortality, including bycatch.

Numerous courts have addressed the Magnuson-Stevens Act’s bycatch mandates. For example, in Conservation Law Foundation v. Evans, the court found that a plan amendment lacked measures to minimize bycatch and failed to analyze whether pre-existing measures “specifically complied with” the bycatch mandate.¹¹⁴ In Pacific Marine Conservation Council, Inc. v. Evans, the court found a plan provision contrary to NS9, observing that the statute “requires timely action on bycatch reduction and further requires that *all practicable measures* be included in the fishery management plan.”¹¹⁵ And in Flaherty v. Bryson, the court rejected an amendment that lacked bycatch-reduction measures even though several pre-existing measures had an “incidental effect” on bycatch.¹¹⁶ Rather, the agency needed to address “whether the FMP, as amended, actually minimizes bycatch to the extent

¹⁰⁹ 80 Fed. Reg. at 2795.

¹¹⁰ 16 U.S.C. § 1853(a)(15).

¹¹¹ 50 C.F.R. §§ 600.310(f)(2)(iv) (proposed rule at 600.310(f)(1)(iii), 600.310(g)(1).

¹¹² *Id.* § 600.310(f)(2)(i) (proposed rule at 600.310(f)(1)(i) (defining “catch”); *Oceana*, 831 F. Supp. 2d at 115-16 (“Since the ‘catch’ limited by ACLs includes both fish that are retained (landed) and bycatch that are discarded at sea, *see* 50 C.F.R. § 600.310(f)(2)(i), the [annual catch limits for the stocks at issue] may be exceeded by accumulation of bycatch alone.”).

¹¹³ *Id.* § 1851(a)(9).

¹¹⁴ Conservation Law Foundation v. Evans, 209 F. Supp. 2d 1, 14 (D.D.C. 2001).

¹¹⁵ Pacific Marine Conservation Council, Inc. v. Evans, 200 F. Supp. 2d 1194, 1201 (N.D. Cal. 2002) (emphasis added).

¹¹⁶ Flaherty v. Bryson, 850 F. Supp. 2d 38, 58 (Dist. D.C. 2012).

practicable.”¹¹⁷ These cases show that even small amounts of catch and bycatch must be accounted for and minimized, even if it is unlikely to result in overfishing.

Management of Pacific sardine provides an example of the importance of AMs for bycatch. The Pacific Fishery Management Council recently closed the directed sardine fishery.¹¹⁸ Per the Coastal Pelagic Species FMP, directed commercial fishing for sardine is not allowed when the biomass of sardine is at or below 150,000 metric tons,¹¹⁹ so the allowable harvest guideline for this season is set to zero for the directed commercial fishery. Although the directed commercial fishing will close, up to an additional ACL of 7,000 metric tons of sardines will still be allowed as incidental catch in other fisheries, and as live bait, Tribal, and research catch. If the 7,000 metric tons is reached, these other fisheries will also be closed for the remainder of the fishing season.

In this example, the ACL for the directed fishery is set equal to zero, but relatively small amounts of catch and bycatch will continue to occur. That catch and bycatch is unlikely to result in overfishing because that additional catch and bycatch is accounted for and limited to 7,000 metric tons. Here, the Pacific Council has taken appropriate steps by closing the directed fishery, but is further relying on additional AMs (beyond the closure) to account for other sources of mortality. The ACL of zero is not the only measure to assure the ACL is not exceeded; it is accompanied by additional AMs to account for catch and bycatch in other fisheries, in accordance with the law.

NOAA Fisheries should take steps to ensure that the NS1 language cannot be interpreted to allow other catch and bycatch to continue unchecked. All catch and bycatch must still be accounted for, even if it is “only small amounts” or is “unlikely to result in overfishing.”¹²⁰ ***Thus, we recommend the agency to add additional language to ensure that this proposal cannot be construed to exempt stocks with an ACL of zero from NS9 and from the accountability measure and catch accounting requirements.***

Highlighted recommendations:

Please see the blueline in the appendix of this document for our complete recommendations. We excerpt sections here for additional discussion.

§600.310(g)(3) – We recommend language clarifying that additional AMs may be necessary, even if an ACL is set to zero and the directed fishery is closed. We will cover our additional recommendations in this section later in these comments.

(3) *AMs for when the ACL is exceeded.* On an annual basis, the Council must determine as soon as possible after the fishing year if an ACL or sector-ACL was exceeded. If an ACL or sector-ACL was exceeded, AMs must be ~~triggered and~~ implemented as soon as possible to correct the operational issue that caused the ACL or sector-ACL overage, as well as any biological consequences to the stock or stock complex resulting from the overage when it is known. These AMs ~~could~~ should include an overage adjustment, as well as a range of among other things potential measures, including modifications of inseason AMs, or the use or modification of ACTs;

¹¹⁷ *Id.*

¹¹⁸ PFMC, “Council votes to close 2015-2016 Pacific Sardine Fishery,” (April 13, 2015), available at <http://www.pcouncil.org/2015/04/36387/council-votes-to-close-2015-2016-pacific-sardine-fishery/>.

¹¹⁹ PFMC, Coastal Pelagic Species Fishery Management Plan, as amended through Amendment 13, at 39-40 (Sept. 2011).

¹²⁰ NOAA Fisheries “Red-line document,” § 600.310(g)(3), p 17.

~~or overage adjustments. The type of AM chosen by a Council will likely vary depending on the sector of the fishery, status of the stock, the degree of the overage, recruitment patterns of the stock, or other pertinent information. If an ACL is set equal to zero and the AM for the fishery is a closure that prohibits fishing for a stock, additional AMs may still be necessary to prevent other sources of mortality from exceeding the ACL, including, but not limited to, AMs to address bycatch in accordance with National Standard 9. are not required if only small amounts of catch or bycatch occur, and the catch or bycatch is unlikely to result in overfishing. For stocks and stock complexes in rebuilding plans, the AMs should include overage adjustments that reduce the ACLs or sector-ACLs in the next fishing year by the full amount of the overages, unless the overage is shown by the best scientific information available to be the result of greater recruitment and abundance than expected and shows that a reduced overage adjustment, or no adjustment, is needed to mitigate the effects of the overages. If catch exceeds the ACL for a given stock or stock complex more than once in the last four years, the system of ACLs and AMs should be re-evaluated, and modified if necessary, to improve its performance and effectiveness. A Council could choose a higher performance standard (e.g., a stock's catch should not exceed its ACL more often than once every five or six years) for a stock that is particularly vulnerable to the effects of overfishing, if the vulnerability of the stock has not already been accounted for in the ABC control rule.~~

Section 4 – Changes that weaken rebuilding efforts

4.1 – Changes to the definition of overfished and minimum stock size threshold (MSST) weaken the foundation of overfished determinations.

The PR suggests “minor” revisions to the definitions of overfished and MSST “to improve clarity and reduce redundancy.”¹²¹ The agency suggests these revisions will not result in a change in how overfished and MSST are used; we disagree.

In the case of the definition of overfished, the agency proposes to define this key term relative to the MSST,¹²² rather than following the statutory definition, which defines it as a level where the capacity of the stock to achieve maximum sustainable yield on a continuing basis is jeopardized.¹²³ The MSY language is instead moved into the definition for MSST.¹²⁴ We object to this change for two reasons. First, the guidelines should not create different definitions than those in the Magnuson-Stevens Act. Second, this change in definition could lead to problems if MSST is not properly specified by a Council.

For instance, if the MSST is set very low, a situation can arise where the biomass and fishing rates of a stock indicate that the stock is overfished and cannot produce MSY on a continuing basis, but the MSST threshold has yet to be crossed. This occurred recently with case of Pacific sardine. While the problem is addressed for the time being with a fishery closure, it highlights an example in which relying on only an MSST, which in this case has not been updated and does not comply with existing NS1 guidelines for maintaining higher biomass of forage fish, may not lead to an accurate determination of whether the stock is overfished. Using the statutory definition is the most reliable and accurate way to make that determination, especially when new science reveals that the stock may require a higher biomass to be

¹²¹ 80 Fed. Reg. at 2791.

¹²² NOAA Fisheries “Red-line document,” 600.310(e)(2)(i)(E), p 8.

¹²³ 16 U.S.C. § 1802(34).

¹²⁴ NOAA Fisheries “Red-line document,” 600.310(e)(2)(i)(G), p 9.

sustainable. Forage fish, for instance, need more precautionary management that accounts for their role as prey in the ecosystem.

In the case of using status determination criteria (SDCs) to determine overfished status, the PR replaces existing language with a weaker standard. The existing guidance in the NS1 Guidelines on how to set MSST reads as follows: “To the extent possible, the MSST should equal whichever of the following is greater: One-half the MSY stock size, or the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years, if the stock or stock complex were exploited at the MFMT”, where MFMT is the level of fishing above which overfishing is occurring. The proposed rule deletes this language, and replaces it with much more general language: “MSST should be between $\frac{1}{2}$ Bmsy and Bmsy, and could be informed by the life history of the stock, the natural fluctuations in biomass associated with fishing at MFMT over the long-term, the time needed to rebuild to Bmsy and associated social and/or economic impacts on the fishery, the requirements of internationally-managed stocks, or other considerations.”¹²⁵

The existing language is stronger as it recommends choosing between the greater of two options, one of which is tied to rebuilding within a 10 year period. This is a more protective standard than that in the PR, which instead gives Councils discretion to set MSST wherever they wish, down to $\frac{1}{2}$ Bmsy. This would likely allow stocks to drop lower in biomass before being declared overfished and having to rebuild.

Thus, the agency should restore the existing language defining overfished, MSST, and the use of MSST to determine the status of the stock.

Highlighted recommendations:

Please see the blueline in the appendix of this document for our complete recommendations. We excerpt sections here for additional discussion.

§600.310(e)(2)(i) – We recommend restoring the connection between “overfished” in the guidelines and the statutory definition of the term.

(2) *Status determination criteria*—

(i) *Definitions.*

(E) *Overfished.* A stock or stock complex is considered “overfished” when its biomass has declined below ~~MSST, a level that jeopardizes the capacity of the stock or stock complex to produce MSY on a continuing basis.~~ a level that jeopardizes the capacity of the stock or stock complex to produce MSY on a continuing basis.

...

(~~FG~~) *Minimum stock size threshold (MSST)* means the level of biomass below which the capacity of the stock or stock complex ~~is considered to be overfished~~ produce MSY on a continuing basis has been jeopardized (i.e., overfished).

§600.310(e)(2)(ii)(B) – We recommend the existing language should be restored to this section.

4.2 - Changes to the timelines for rebuilding need additional clarity to ensure rebuilding occurs in as short a time as possible.

¹²⁵ NOAA Fisheries “Red-line document,” 600.310(e)(2)(ii)(B), p 10.

The PR makes numerous changes to rebuilding, including a new description of T_{min} (the minimum time to rebuild an overfished population) and alternate calculations for T_{max} (the maximum time to rebuild, which should be as short a time as possible taking into account the status and biology of stocks, the needs of fishing communities, international recommendations, and the marine ecosystem).¹²⁶ In general, the agency needs to close loopholes in this section and add clarity to the T_{max} calculations to ensure statutory obligations are fulfilled. While the changes in the PR are a step in the right direction, we recommend changes to clarify the expectations when setting T_{target} (we will highlight these below).

In the case of T_{min} , the proposed language sets the starting year for this calculation at the first year the rebuilding plan is to be implemented. But this creates a loophole where Councils that delay the implementation of their rebuilding plan will be able to set their starting year later than is appropriate. We offer suggestions for language that will remove this loophole.

In the case of T_{max} , we appreciate that Councils have had some difficulty calculating this value for certain fish stocks under the current methodology. The addition of other methodologies that result in similar lengths of time to rebuild and probabilities of rebuilding is understandable. However, the agency has not given sufficient guidance for how Councils should choose between methods, or, in the case that multiple methods are calculated, how to choose between results. Adding formulas without guidance increases the uncertainty in the management system. It is obviously inappropriate for Councils to calculate T_{max} using all three methods and then choose the longest timeframe allowed, as that is contrary to the Magnuson-Stevens Act's directive to rebuild in as short of time as possible. However, we recognize that some methods will have less scientific uncertainty than others, based on the availability and quality of data on the stock in question. Therefore, we recommend that the agency add guidance suggesting the choice of method should consider uncertainty as well as the obligation to rebuild in as short a time as possible.

As for the alternative methodologies themselves, new research underway by Drs. Andrew Cooper, Ashleen Benson, and Tom Carruthers is examining the relative performance of six rebuilding strategies using closed-loop simulation models. The strategies are: (1) set fishing mortality rate to rebuild ($F_{rebuild}$) in 10 years if possible or in $T_{min} + 1$ generation length, where T_{min} is the time it takes to rebuild in the absence of fishing; (2) set $F_{rebuild}$ so that the stock rebuilds in $2 * T_{min}$ years; (3) set fishing mortality rate to F_{msy} ; (4) set fishing mortality rate to 75% of F_{msy} ; (5) set fishing mortality rate based on a 40-10 control rule capped at F_{msy} ; and (6) set fishing mortality rate based on a 40-10 control rule capped at 75% F_{msy} . Preliminary results show that a constant harvest rate of 75% F_{msy} has almost equal or shorter rebuilding times than current $F_{rebuild}$ (10 years or $T_{min} + 1$ generation time) but has only slightly reduced catches. Setting rebuilding time at $2 * T_{min}$ generally takes longer to rebuild than current rebuilding timeframe but has slightly higher catches and is similar to constant harvest rate at 100% F_{msy} . The 40-10 Control rule consistently has shorter rebuilding times than all other strategies, but at the expense of greatly reduced catches in the short term. These patterns are consistent across life histories, implementation error assumptions, and assessment frequency. One potential downside of the constant harvest rate strategy (*i.e.*, 75% F_{msy}) is that there are no abundance-based conservation mechanisms to ensure that the stock stays on its rebuilding trajectory if, for example, natural mortality is higher, or recruitment is lower than expected.

Given these results, it seems that there are valid alternative ways to calculate T_{max} that will still fulfill the requirements of the Magnuson-Stevens Act. We have some concerns that the $2 * T_{min}$ strategy is not

¹²⁶ 16 U.S.C. § 1854(e)(4)(A)(i).

performing as well as the others, which makes it even more important that the agency provide useful guidance for how to choose between the strategies. We also note that just setting the Tmax is only one part of achieving rebuilding in as short a time as possible. Rebuilding plans must be reviewed for effectiveness and modified as necessary to achieve this goal. We will discuss this more in the next section of our comments.

Additionally, we suggest that the agency consider issuing technical guidance, or clarify in these guidelines, the preferred methodology of calculating “mean generation time.” Councils have interpreted this in different ways, resulting in inconsistent application of the guidelines between regions. A preferred technique for determining the generation time is needed.

We also appreciate the agency did not attempt to undermine the 10 year timeline, which has been very successful at driving necessary management actions to ensure timely rebuilding so that fishing communities can benefit from healthy populations. We note, as the agency is aware, that this time frame is mandated by the Magnuson-Stevens Act. The timeframe is not arbitrary, despite claims to the contrary by its opponents, as it is based on the idea that most overfished stocks can rebuild in 5 years in the absence of fishing. This was recently confirmed by agency scientists.¹²⁷ Congress doubled that time frame to allow managers to permit some fishing while still rebuilding stocks that are overfished. As there are no stocks that have ever been subjected to a 10-year moratorium on fishing, it is clear that the law and guidelines contain sufficient flexibility already to allow managers to create rebuilding scenarios that work for their fisheries.¹²⁸ The majority of stocks in rebuilding plans in the U.S. have timelines that exceed 10 years.¹²⁹

Finally, we are encouraged that the agency is issuing stronger guidance on the use of Ttarget. A target timeframe is an important concept for rebuilding plans, as it allows managers to create precautionary plans that attempt to achieve rebuilding in as short a time as possible, rather than setting fishing rates at levels intended to achieve rebuilding in the maximum allowed time. Effective use of Ttarget should result in fewer stocks failing to rebuild by the end of their plan. We offer suggestions to improve upon the agency’s changes to Ttarget.

In conclusion, the agency should close loopholes in the Tmin definition, further strengthen the use of Ttarget, and provide useful guidance for how Tmax can be calculated using different methodologies while still achieving rebuilding quickly. We will offer additional comments on how these timeframes can be used in our next section.

Highlighted recommendations:

Please see the blueline in the appendix of this document for our complete recommendations. We excerpt sections here for additional discussion.

§600.310(j)(2)(ii) – We recommend that the agency restore the sentence “If the stock or stock complex is overfished and overfishing is occurring, the rebuilding plan must end overfishing immediately and be consistent with ACL and AM requirements of the Magnuson-Stevens Act” to the end of this section. This

¹²⁷ Patrick, Wesley S. and Cope, Jason. “Examining the 10-Year Rebuilding Dilemma for U.S. Fish Stocks.” (2014) *PLOS ONE*. 9(11):e112232. Doi:10.1371/journal.pone.0112232

¹²⁸ *Id.*

¹²⁹ The Pew Charitable Trusts. “Timelines work.” (2014)

http://www.pewtrusts.org/~media/Assets/2014/06/06/Federal_Fisheries_Timelines_June_2014.pdf

plain-language description is important to ensure fishery management occurs in compliance with the Act.

§600.310(j)(3)(i)(A) – We suggest alternate language for T_{min} to close loopholes that would allow for delay in starting a rebuilding plan.

(A) *The “minimum time for rebuilding a stock” (T_{min}).* T_{min} means the amount of time the stock or stock complex is expected to take to rebuild to its MSY biomass level in the absence of any fishing mortality. In this context, the term “expected” means to have at least a 50 percent probability of attaining the B_{msy} . ~~where such probabilities can be calculated. The starting year for the T_{min} calculation should be the first year that the rebuilding plan is expected to be implemented.~~ The starting year for the T_{min} calculation is 2 years after notification that a stock or stock complex is overfished or the first year that a rebuilding plan is expected to be implemented, whichever is sooner.

§600.310(j)(3)(i)(B) – As discussed above, we recommend that the agency include guidance as to how to weigh and select a method for determining T_{max} . We have made a suggestion below, but the agency may want to consider more detailed instructions.

(B) *The maximum time for rebuilding a stock or stock complex to its B_{msy} (T_{max}).*

~~(1C)~~ If T_{min} for the stock or stock complex is 10 years or less, then ~~the maximum time allowable for rebuilding (T_{max}) that stock to its B_{msy}~~ is 10 years.

~~(2D)~~ If T_{min} for the stock or stock complex exceeds 10 years, then ~~the maximum time allowable for rebuilding a stock or stock complex~~ one of the following methods can be used to ~~its B_{msy}~~ determine T_{max} :

(i) T_{min} plus the length of time associated with one generation time for that stock or stock complex. “Generation time” is the average length of time between when an individual is born and the birth of its offspring,

(ii) The amount of time the stock or stock complex is expected to take to rebuild to B_{msy} if fished at 75 percent of MFMT, or

(iii) T_{min} multiplied by two.

~~(3)~~ When selecting a method for determining T_{max} , Councils, in consultation with their SSC, must choose a method that reduces uncertainty, is based on the best scientific information available, and meets the requirement to rebuild in as short a time as possible. Councils must provide a quantitative rationale for their choice. ~~a Council must provide a rationale for its decision based on the best scientific information available~~

§600.310(j)(3)(i)(C) – We offer language that will further strengthen and encourage the use of T_{target} . The agency should consider additional ways to encourage Councils to effectively use this important tool.

(C) Target time to rebuilding a stock or stock complex (T_{target}). T_{target} is the specified time period for rebuilding a stock that is considered to be in as short a time as possible, while taking into account the factors described in paragraph (j)(3)(i) of this section. T_{target} shall not exceed T_{max} , and the fishing mortality associated with achieving T_{target} is referred to as $F_{rebuild}$. T_{target} should be a shorter period of time than T_{max} . If a Council recommends a T_{target} that equals T_{max} , absent an analysis and explanation of why rebuilding any sooner than T_{max} is not possible, the Secretary may presume that the proposed T_{target} will not rebuild the stock in as short a time as possible.

4.3 - The PR would allow deficient rebuilding plans to continue indefinitely when overfished stocks fail to make adequate progress in rebuilding.

The proposed definition of “adequate progress”¹³⁰ in rebuilding is insufficient, and combined with other changes in the PR, would allow rebuilding plans to continue without revision past their Tmax, so long as any fishing above Frebuild¹³¹ was controlled with AMs. This assumes that the Frebuild is sufficiently low to allow rebuilding, which is certainly not guaranteed as rebuilding plans only need to have a 50% probability of rebuilding by Tmax. Under this definition, plans failing to meet statutory rebuilding requirements would have no mechanism triggering their review.

The PR suggests the Secretary may find a lack of adequate progress in rebuilding in two situations: one, “if Frebuild or the ACL associated with Frebuild are exceeded, and AMs are not correcting the operational issue that caused the overage and addressing any biological consequences to the stock or stock complex resulting from the overage when it is known”; or two, “when the rebuilding expectations of a stock or stock complex are significantly changed due to new and unexpected information about the status of the stock.”¹³²

The Magnuson-Stevens Act is clear in § 304(e)(7) that the Secretary is obligated to review rebuilding plans every two years, and, if he/she determines that the rebuilding plan has “not resulted in adequate progress toward ending overfishing and rebuilding affected fish stocks” he/she must either take action or notify the relevant Council to consider additional recommended conservation and management measures.¹³³ It is not a suggestion that the Secretary undertake these actions, so guidelines should reflect that this is something the Secretary must do.

Regarding the PR’s first situation where the Secretary may determine a lack of adequate progress in rebuilding stocks, we are concerned that the agency is basing this determination of adequate progress only in relation to the management process of implementing a rebuilding plan. In other words, no analysis is done to determine whether the rebuilding plan is actually rebuilding the stock, only whether the rebuilding plan management mechanisms are proceeding as intended. While it is important to assess whether Councils are successfully implementing their plan, there must be some consideration of biomass when determining if a plan is making adequate progress. Indeed, the section of the Magnuson-Stevens Act referenced above insists this must be the case, as the Secretary is required to determine if adequate progress is being made in “rebuilding affected stocks,” not just whether a possibly deficient plan is being well-implemented or not.

In the second case, we object to the characterization of the information necessary to trigger a lack of adequate progress determination as “unexpected.” When Councils receive information from their stock assessments showing the population is in much worse shape than expected, this information should not have to be unanticipated for the Secretary to find that sufficient progress is not being made.

¹³⁰ NOAA Fisheries “Red-line document,” 600.310(j)(3)(iv), p 39.

¹³¹ The fishing mortality rate associated with achieving the rebuilding target.

¹³² NOAA Fisheries “Red-line document,” 600.310(j)(3)(iv), p 39.

¹³³ 16 U.S.C. § 1854(e)(7).

We suggest adding an additional case, in which a lack of adequate progress should be found if the biomass of the stock is not increasing as expected from the rebuilding plan. This case will meet the requirement in the Magnuson-Stevens Act to find a lack of adequate progress if the stock is not rebuilding.

Further, the PR does not offer sufficient guidance regarding what to do if the Secretary finds a lack of adequate progress. The cases should be handled differently. In the agency's first case, a new or revised rebuilding plan must reexamine if $F_{rebuild}$ is adequate, and must contain new management measures that will keep F below $F_{rebuild}$. In the second case, significantly revised rebuilding expectations can create perverse incentives to actually increase the fishing mortality rate on an unhealthy stock. It should be clear that this is not permitted, and that the new rebuilding plan must, at a minimum, maintain the current $F_{rebuild}$, or reduce it further as needed. Under our proposed case, where biomass is failing to increase, the rebuilding plan should contain new measures to reduce fishing mortality.

In addition to these insufficient definitions and responses to a lack of adequate progress, the PR contains further measures that would weaken the implementation of rebuilding. The PR's suggested revisions to §310(j)(3)(v) of the guidelines would allow Councils to continue using the same $F_{rebuild}$ for an indefinite period of time past the rebuilding timeframes, so long as the Secretary has not found a lack of adequate progress.¹³⁴ This proposal suggests the agency's strategy is to allow environmental circumstances to deliver a good recruitment year, presuming that the current rebuilding plan controls fishing mortality at a rate that would not suppress that population surge. But the agency cannot count on such events to rebuild fish populations. While the law suggests that the timeframe should be as short as possible while considering the interaction of the overfished stock within the marine ecosystem, that does not give the agency a license to suspend all action or assessment of rebuilding progress. We are sensitive to the complex realities of rebuilding fish populations, but the agency cannot decide their rebuilding standard is to allow rebuilding to continue indefinitely, without taking action to increase the biomass of the stock, until environmental conditions create particularly favorable conditions. Climate change and other environmental stressors make this strategy even less likely to work and increase the risk that stocks will collapse while the agency fails to take action.

Thus, we propose revisions to paragraph (v) and (vi) of this section to drive Councils to assess whether their rebuilding plans are adequate to increase the biomass of the stock in the length of time mandated by Congress. Councils should be encouraged to periodically assess whether their $F_{rebuild}$ s are adequate, and should they meet their T_{target} or T_{max} without having rebuilt, F should be lowered to increase the probability that the stock recovers.

The PR fails to ensure rebuilding and fails to improve the current system. In the Gulf of Mexico, the greater amberjack gives a good example for why simply waiting until the end of a rebuilding plan to take action is a bad idea. The rebuilding plan expired in 2012, and the population has failed to recover. While the Council has taken significant action recently that reduces fishing mortality and gives the stock a good chance of rebuilding, it still lacks a true rebuilding plan. Had the Council been required to take action during the rebuilding plan to assess its adequacy, the fishery could have stabilized earlier, and could perhaps be yielding higher quotas today. New England has gone through multiple rebuilding plans for cod that have all failed, primarily because of insufficient management decisions that carried too much risk to efforts to end overfishing and rebuild the stocks. The permissive rebuilding strategies contained in the PR only further encourage this failed approach. Meanwhile the Councils that have taken action

¹³⁴ NOAA Fisheries "Red-line document," 600.310(j)(3)(v), p 39.

quickly and adjusted rebuilding plans as necessary – such as the Mid-Atlantic Fishery Management Council and the Pacific Fishery Management Council – have rebuilt many stocks and are making steady progress on others.

When rebuilding plans fail to meet their targets, this should trigger a reexamination of the plan and reductions in fishing mortality, not a continuation of the same inadequate policies. **Thus, the agency must significantly modify the section on adequate progress in rebuilding to ensure that stocks are actually recovering and that managers take necessary actions to give vulnerable populations the conservation they need.**

Highlighted recommendations:

Please see the blueline in the appendix of this document for our complete recommendations. We excerpt sections here for additional discussion.

§ 600.301(j)(3)(iv)-(vi) –We recommend changes to assert the responsibility of the Secretary to determine whether adequate progress is being made, including considering whether stock sizes are increasing under the rebuilding plan. For each case of inadequate progress, the agency should clarify the appropriate management response. During a rebuilding plan, managers should reduce fishing mortality rates to achieve timelines. Should timelines be exceeded, decisive management actions must be taken to increase the chances of rebuilding in as short a time as possible.

(iv) Adequate Progress. The Secretary ~~shall~~ must review rebuilding plans at routine intervals that may not exceed two years to determine whether the plans have resulted in adequate progress toward ending overfishing and rebuilding affected fish stocks (MSA section 304(e)(7)). Such reviews ~~could~~ should include the review of recent stock assessments, comparisons of catches to the ACL, or other appropriate performance measures. The Secretary ~~may~~ must find that adequate progress is not being made if 1) the biomass of the stock is not increasing; 2) $F_{rebuild}$ or the ACL associated with $F_{rebuild}$ are exceeded, and AMs are not correcting the operational issue that caused the overage and addressing any biological consequences to the stock or stock complex resulting from the overage when it is known (see paragraph (g)(3) of this section). ~~A lack of adequate progress may also be found or~~ 3) when the rebuilding expectations of a stock or stock complex are significantly changed due to new ~~and unexpected~~ information about the status of the stock. If a determination is made under this provision, the Secretary will notify the appropriate Council and recommend further conservation and management measures, and the Council must develop and implement a new or revised rebuilding plan within two years (see MSA sections 304(e)(3) and (e)(7)(B)). For Secretarially-managed fisheries, the Secretary would take immediate action necessary to achieve adequate progress toward ending overfishing and rebuilding. For any stock or stock complex where the Secretary determines a lack of adequate progress due to the biomass of the stock not increasing, the new or revised rebuilding plan should recommend new management measures which reduce fishing mortality and take into account other factors, as described in paragraph (e)(2)(iii)(C) of this section. For any stock or stock complex where the Secretary determines a lack of adequate progress due to $F_{rebuild}$ or the associated ACL being exceeded without AMs correcting the operational issue and addressing biological consequences, the new or revised rebuilding plan must contain new management measures that will keep fishing mortality below $F_{rebuild}$, and demonstrate how AMs will prevent and correct any overages should they occur (see paragraph (g)(3) of this section). For any stock or stock complex where the Secretary determines a lack of adequate progress due to significantly changed rebuilding expectations from new information, the new or revised

rebuilding plan should not increase the fishing mortality rate and should reduce it further as needed.

(v) While a stock or stock complex is rebuilding, revising rebuilding timeframes (i.e., T_{target} and T_{max}) or F_{rebuild} is not necessary, unless the Secretary finds that adequate progress is not being made. However, Councils are encouraged to review rebuilding progress to determine if adjustments to F_{rebuild} are necessary to meet rebuilding timeframes (i.e., T_{target} and T_{max}).

(vi) If a stock or stock complex has not rebuilt by T_{max} , then the fishing mortality rate should be maintained at its current F_{rebuild} or 75 percent of the MFMT, whichever is less, until the stock or stock complex is rebuilt, or the Secretary finds that adequate progress is not being made, or the rebuilding plan reaches T_{max} . If the stock has not rebuilt by T_{max} , then the rebuilding F should be maintained at its current F_{rebuild} or 50 percent of the MFMT, whichever is less, until the stock is rebuilt or until the Secretary finds adequate progress is not being made.

4.4 – The PR definition of “depleted” stock is insufficiently supported by science and would complicate management responses.

The PR introduces the term “depleted” in an effort to solve the semantic issue of “overfished,” which can imply that fishing pressure is the sole cause for a decline in stock biomass.¹³⁵ The addition of the term “depleted” to the NS1 terminology is meant to signify situations in which other factors other than fishing pressure, such as environmental conditions, are responsible for biomass declines. While we agree that other factors beyond fishing pressure can and do contribute to stock biomass declines and can hinder stock rebuilding progress, we do not believe it is necessary or prudent to add this term to the NS1 guidelines. We also note that the term “depleted” is defined in the Marine Mammal Protection Act;¹³⁶ adding a second, different definition of this term may create confusion where the agency’s responsibilities to conserve fisheries overlap with the requirements to protect marine mammals.

The new definition of depleted is problematic. We question the attainability of the goal of the proposed definition by subdividing overfished stocks into those that are overfished due to fishing pressure, and those that are classified as overfished due to environmental factors. Fishing pressure can distort the age structure and life histories of stocks in such a way that they fail to recover quickly even in the absence of all fishing mortality; therefore, a stock could be in a vulnerable state for reason other than environmental factors. Further, even overfished stocks with no directed fishing are still affected by fishing activities – their habitat may be degraded by past or current fishing practices, they may be caught as bycatch in other fisheries, or fisheries may be impacting the structure of their ecosystem in ways that prevent them from recovering, e.g., depleting their prey. This is to say that it is a nearly impossible task to scientifically determine whether a stock became overfished due primarily to fishing or environmental factors, and it is similarly challenging to determine whether a population is failing to recover due to residual or ongoing effects from fishing, or from environmental factors. The truth is that it is almost certainly some combination of factors. Thus, we disagree with the premise that the agency could establish a definition under which such determinations could be made with some amount of scientific certainty. The agency should remove the depleted definition from the proposed rule.

The agency also proposes new language at § 600.310(j)(6) of the guidelines– Management measures for depleted stocks¹³⁷ - that is broadly duplicative of guidance at § 600.310(e)(2)(iii) (proposed) –

¹³⁵ 80 Fed. Reg. at 2791.

¹³⁶ 16 U.S.C. § 1362(1).

¹³⁷ NOAA Fisheries “Red-line document,” 600.310(j)(6), p 22.

Relationship of SDC (status determination criteria) to environmental and habitat change.¹³⁸ We wholly support the consideration of habitat and environmental change in rebuilding plans, and support the addition of guidance that will encourage this practice. But many of the additions proposed in the new § 600.310(j)(6) should more appropriately be added to §600.310(e)(2)(iii) to ensure consideration of habitat, insufficient SDCs, inter-governmental partnerships, and research priorities for all overfished stocks. As written, the PR implies many of these things should be considered for “depleted”, but not overfished, stocks. Further, this section should be clear that bycatch is an important consideration for rebuilding stocks. While controlling directed fishing mortality is important, bycatch from other fisheries can result in significant amounts of catch for species with low population levels.

In summary, the agency should remove the depleted definition from the proposed rule and include additional consideration of environmental and habitat factors for all rebuilding plans.

Highlighted recommendations:

Please see the blueline in the appendix of this document for our complete recommendations. We excerpt sections here for additional discussion.

§600.310(e)(2)(i)(F) – We recommend the agency remove the definition of “depleted.”

§600.310(j)(6) – We recommend removing this section as it is duplicative, and the concept of depleted should be removed.

§600.310(e)(2)(iii)(C) – We suggest the agency carry over the strengthening language from proposed (j)(6) into this section, so that all stocks in rebuilding plans can benefit from this additional analysis and action.

(C) If ~~manmade~~ environmental, ecosystem, or habitat changes are partially responsible for a stock or stock complex’s biomass being ~~in an overfished condition below MSST~~ (overfished), in addition to controlling fishing mortality from directed fishing and bycatch, Councils should take remedial actions such as recommending protection and restoration of habitat, reevaluating SDCs to determine if they are representative of current environmental conditions, identifying research priorities to improve the Council’s understanding of the impediments to rebuilding, or partnering with Federal and state agencies to address non-fishing related impacts, and other ameliorative programs to the extent possible (see also the guidelines issued pursuant to section 305(b) of the Magnuson-Stevens Act for Council actions concerning essential fish habitat).

Section 5 – Opportunities to strengthen the guidelines and advance ecosystem-based fisheries management

5.1 Management goals and objectives should include ecosystem considerations and be reviewed regularly.

The agency has taken a step in the right direction with the addition of § 600.305(b)(2), specifying that Councils should reassess the objectives of a fishery on a regular basis, so that FMPs reflect the changing needs of the fishery over time. However, the agency should expand the fishery management objectives

¹³⁸ NOAA Fisheries “Red-line document,” 600.310(e)(2)(iii), p 10.

section to give greater guidance on what Councils should consider when creating and assessing objectives. Fishery management plans are the primary tool for achieving the goals of the Magnuson-Stevens Act, including preventing overfishing and rebuilding stocks, conserving fish stocks and marine ecosystems, protecting habitat, minimizing bycatch, and achieving optimum yield. The agency should more closely tie these objectives to the national standards and the ecological, economic, and social aspects of OY determinations. Fishery management objectives that identify goals with measurable benefits on these topics would advance ecosystem-based fisheries management. Moving fisheries management towards EBFM is a priority for the agency,¹³⁹ for the conservation community, and for many fishermen. By thinking more broadly about the challenges and goals of management, Councils can identify ways to make attainable, measurable progress.

In addition, the agency should give further guidance for the types of evaluations that should be done to assess whether FMPs are meeting their objectives. These sorts of assessments have developed significantly in the last few years as techniques such as management strategy evaluations have proliferated. In addition to techniques like management strategy evaluations, the NS1 guidelines should promote the development and use Fishery Ecosystem Plans to identify ecosystem-level goals and corresponding measurable objectives that can be implemented through existing FMPs.

In summary, we recommend strengthening guidance on management objectives, and encouraging review of whether management is achieving those objectives.

Highlighted recommendations:

Please see the blueline in the appendix of this document for our complete recommendations. We excerpt sections here for additional discussion.

600.305(b) – We recommend the agency clarify the types of objectives that should be developed by Councils, and highlight the importance of conservation and ecosystem objectives. We additionally recommend an evaluation of the effectiveness of management in achieving those objectives.

(b) Fishery management objectives.

(1) Each FMP, whether prepared by a Council or by the Secretary, should identify what the FMP is designed to accomplish (i.e., the management objectives to be attained in regulating the fishery under consideration). **These management objectives should reflect the requirements of the Magnuson-Stevens Act, including preventing overfishing and rebuilding overfished stocks, ensuring conservation of marine ecosystems, protecting essential fish habitat, and achieving optimum yield.** In establishing objectives, Councils balance biological constraints with human needs, reconcile present and future costs and benefits, and integrate the diversity of public and private interests. If objectives are in conflict, ~~priorities should be established among them~~ **the FMP must give priority to preventing overfishing and achieving optimum yield as required by National Standard 1.**

(2) **To reflect the changing needs of the fishery over time, Councils should reassess the management objectives of the fishery on a regular basis.**

(3) How objectives are defined is important to the management process. Objectives should address the **needs and** problems of a particular fishery. The objectives should be clearly stated, practicably attainable, framed in terms of definable events and measurable benefits, and based

¹³⁹ NOAA Fisheries. Ecosystem-Based Fisheries Management.
<http://www.st.nmfs.noaa.gov/ecosystems/ebfm/index>

upon a comprehensive rather than a fragmentary approach to the problems addressed. An FMP should make a clear distinction between objectives and the management measures chosen to achieve them. The objectives of each FMP provide the context within which the Secretary will judge the consistency of an FMP's conservation and management measures with the national standards.

(4) Councils should evaluate the effectiveness of current management measures in achieving management objectives on a regular basis. In monitoring FMP effectiveness, Councils should use management strategy evaluations, Fishery Ecosystem Plans, risk assessments, risk management, and other appropriate methodologies.

5.2 The concept of optimum yield (OY) should be further enhanced and integrated into management.

Our comments during the 2012 Advanced Notice of Proposed Rulemaking (ANPR)¹⁴⁰ related to NS1 requested that the agency provide greater guidance on the relationship between OY and other required management criteria including OFL, MSY, ABC, and ACL. We also suggested that Councils more specifically account for OY in their FMP and catch specification decisions, and highlighted many examples for how OY was inadequately being applied in FMPs around the country. We are encouraged that the agency considered these requests and, for the most part, has taken initial steps to improve the relevant sections, and, in general, we support these changes. However, more should be done to secure the connection between OY and management. To make OY more fully operational in the new system of ACLs and AMs, we recommend that the agency should further clarify the relationship of ACL to OY by defining ACL in relation to OY and include guidance on the use of control rules designed to account for OY factors in the specification of ACL or ACT.

The Magnuson-Stevens Act requires FMPs to assess, specify and achieve OY in each fishery on a continuing basis.¹⁴¹ In the Magnuson-Stevens Reauthorization Act (MSRA) of 2006, Congress added requirements for ABC and ACL but neither is defined and their relationship to OY is not clearly stated. However, the legislative history from the 2006 reauthorization shows that Congress conceived ACL as a means of achieving OY: ACL was described as an amount of fishing that would be set “at or below OY” with the intent “not only to prevent overfishing from occurring, but also to drive improvements in fishery data collection and research to develop a more precise assessment of the amount of fish that can be caught without exceeding OY.”¹⁴²

Therefore, it is appropriate for the NS1 guidance to correct any ambiguities on the form that OY must take and its relationship to the ACL framework. The majority of FMPs now equate OY with ACL or ACT, but lack explicit mechanisms in the ACL or ACT specification process to evaluate and account for management uncertainties and OY factors in an organized, consistent, transparent way. It should be made clearer that there is an annual value which corresponds to the long-term average OY. We recommend the use of a control rule to ensure that relevant OY factors and management uncertainty are being considered when using the ACL or the ACT as an annual expression of OY. Further, we recommend adding OY to the definition of ACL to better unify those sections of the guidelines.

¹⁴⁰ The Pew Charitable Trusts. (2012) “Re: Fisheries of the United States; National Standard 1 Guidelines. Advance Notice of Proposed Rulemaking. 77 Fed. Reg. 26238 (May 3, 2012).”

¹⁴¹ 16 U.S.C. §§ 1851(a)(1), 1853(a)(3).

¹⁴² S. Rep. 109-229 on S. 2012 at 7 (April 4, 2006).

We recommend the agency update the ecological factors to be considered for OY. As mentioned previously in these comments, climate change may significantly alter fish populations, and Councils should be considering that as they manage their fisheries. Also, it is well established in the literature that forage fish warrant specific, precautionary management that includes limit reference points below which no fishing can occur.¹⁴³ Forage fish underpin the food webs of our marine ecosystems, and fishing communities and interconnected species benefit by leaving them in the water to feed more valuable predators. Additionally, managers should consider the benefits of restoring age structure, preserving species diversity, and maintaining food web structure and function.

In summary, the PR takes positive steps towards connecting OY to the ACL framework, but more should be done to ensure the diverse array of OY considerations are adequately considered and connected to management.

Highlighted recommendations:

Please see the blueline in the appendix of this document for our complete recommendations. We excerpt sections here for additional discussion.

§310(e)(3)(i) - We recommend that the definition of OY should clearly state that OY cannot exceed MSY in any circumstance, and it should be clear that OY involves reductions from MSY for social, economic and ecological factors.

§310(e)(3)(iii) – Section 303(a)(3) of the Magnuson-Stevens Act clearly requires that “(a)ny fishery management plan...shall...assess and specify OY...and include a summary of the information utilized in making such a specification.”¹⁴⁴ OY is a defined term and is a mandatory, not a discretionary, feature of the law. Thus, we recommend that Councils must (as opposed to should, as is written in the PR) include the summary mandated above.

(iii) Assessing OY. An FMP must contain an assessment and specification of OY, **including which documents how the OY will account for relevant ecological, economic, and social factors in order to produce the greatest benefits to the nation and prevent overfishing. The assessment should must include** a summary of information utilized in making such specification, consistent with requirements of section 303(a)(3) of the Magnuson-Stevens Act. ~~A Council must identify those and as well as accounting for consideration of the~~ economic, social, and ecological factors relevant to management of a particular stock, stock complex, or fishery, ~~and then evaluate them to determine the.~~ Consistent with Magnuson-Stevens Act section 302(h)(5), the assessment and specification of OY. ~~The choice of a particular OY must should must be~~ **carefully documented to show reviewed on a continuing basis, so that the OY selected will produce it is responsive to changing circumstances in the greatest benefit to the Nation and prevent overfishing fishery.**

§310(e)(3)(iii)(B) and 310(e)(3)(iii)(B)(3) - We recommend restoring language clarifying that OY should be considered quantitatively when possible. In addition, we significantly enhance the ecological factors section to further protect critical forage fish, and consider ecosystem factors such as age structure,

¹⁴³ Ellen Pikitch et al., *Little Fish, Big Impact: Managing a Crucial Link in Ocean Food Webs*, Lenfest Ocean Program (2012), <http://www.lenfestocean.org/en/publications/research-reports/little-fish-big-impact>.

¹⁴⁴ 16 U.S.C. § 1853(a)(3) (emphasis added).

species diversity, and food web structure and function. We also specifically direct Councils to consider the effects of climate change.

~~(C-3)~~ *Ecological factors.* Examples include impacts on ecosystem component species, forage fish stocks, other fisheries, predator-prey or competitive interactions, marine mammals, threatened or endangered species, and birds. Species interactions that have not been explicitly taken into account when calculating MSY should be considered as relevant factors for setting OY below MSY. *Other factors include considering the value of distributed age structure, species diversity, and food web structure and function.* In addition, consideration should be given to managing forage stocks for higher biomass than Bmsy to enhance and protect the marine ecosystem, *along with consideration of threshold levels below which no fishing should occur on forage stocks to preserve ecosystem function.* Also important are ecological or environmental conditions that stress marine organisms *or their habitat*, such as natural and manmade changes in wetlands or nursery grounds, and effects of pollutants on habitat and stocks. *Effects from climate change including warming waters, acidification, shifting ranges of stocks, and altered species and habitat resiliency should be considered.*

§310(e)(3)(iv)– We recommend restoring full catch accounting when specifying OY, as it is critically important to consider all sources of mortality when setting the optimum level of output for the fishery. We also suggest adding language clarifying the Secretary’s expectations for the setting of OY. If OY is set very close to MSY, the Secretary may presume that the Council failed to adequately consider OY factors. As mentioned in previous sections, we recommend removal of the aggregate MSY concept.

~~(iv) Specifying OY. The specification of OY must be consistent with paragraphs (e)(3)(i)-(iv) of this section.~~ If the estimates of MFMT and current biomass are known with a high level of certainty and management controls can accurately limit catch, then OY could be set very close to MSY, assuming no other reductions are necessary for social, economic, or ecological factors. *However, NMFS expects that in most cases OY will be reduced from MSY so that OY can be achieved without increasing the risk of overfishing and to account for relevant OY factors. If a Council recommends an OY which is very close to MSY, the Secretary will presume that the proposal would not achieve OY in the absence of sufficient analysis and justification. To the degree that such MSY estimates and management controls are lacking or unavailable, or reductions are necessary to account for social, economic, and ecological factors (including uncertainty regarding these factors), OY should be set farther from MSY. If management measures cannot adequately control fishing mortality so that the specified OY can be achieved without overfishing, the Council should reevaluate the management measures and specification of OY so that the dual requirements of NS1 (preventing overfishing while achieving, on a continuing basis, OY) are met.*

§310(f)(1)(iii)– To further connect OY to the ACL framework, we include the relationship between the two in the definition of ACL.

~~(iii)~~ *Annual catch limit (ACL) is a limit on the level of total annual catch of a stock or stock complex, which cannot exceed the ABC, that is intended to achieve OY on a continuing basis from a stock, stock complex, or a fishery and serves as the basis for invoking AMs. ACL cannot exceed the ABC, but An ACL may be divided into sector-ACLs (see paragraph (f)(54) of this section).*

§310(f)(4)(vi) - We suggest clarifying changes to ensure that OY is reduced from MSY by accounting for ecological, economic and social factors, and strengthen language tying OY to the ACL or ACT framework. In addition, we suggest useful strategies for including an OY control rule to ensure OY is being implemented.

(vi) Relationship between OY and the ACL framework. The dual goals of NS1 are to prevent overfishing and achieve on a continuing basis OY. As described in section 3(33) of the Magnuson-Stevens Act and paragraph (e)(3) of this section, OY is determined by reducing MSY to account for ecological, economic, and social factors. While OY is a long-term average amount of desired yield, there is, for each year, an amount of fish that is consistent with achieving the long-term OY. To determine this amount of fish annually, OY factors should be accounted for explicitly in the ACL framework. The accounting for OY factors should take place at the ACL or ACT level. OY factors generally are not accounted for at the OFL or ABC levels, as the OFL is an annual representation of MSY, and the ABC is an upper limit on annual catch that is designed to prevent overfishing. Instead, the ACL or ACT should be set below ABC to the extent needed to account for OY considerations (e.g., needs of forage fish, promoting stability, addressing market conditions, etc.), as well as to account for management uncertainty as described in paragraphs (f)(1)(v) and (f)(4)(i) of this section. In reducing ACL or ACT from the ABC level to account for OY factors and management uncertainty, Councils should use an ACL or ACT control rule that explicitly sets forth the relevant ecological, economic, or social factors being accounted for, in addition to management uncertainty in the fishery, and explains how these factors are addressed on an annual basis. The control rule may be qualitative but it must be based on the best scientific information available, including Stock Assessment and Fishery Evaluation (SAFE) reports, Ecosystem Status reports, Fishery Ecosystem Plans (FEPs), Management Strategy Evaluations (MSEs) or other information used in the catch specification process.

Section 6 – Other comments

6.1 Pew supports the inclusion of habitat considerations for rebuilding stocks.

We strongly support the inclusion of habitat considerations in section 310(e)(2)(iii), “Relationship of SDC to environmental and habitat change”, section (e)(3)(iii)(A), “Determining the greatest benefit to the Nation,” and section 310(e)(3)(iii)(B), “Economic, ecological, and social factors.”

6.2 Accountability measures should be enhanced by ensuring sector-AMs are applied and overage adjustments are required.

The proposed guidelines state at §310(f)(4)(ii) that “if sector-ACLs are used, sector-AMs should also be specified.”¹⁴⁵ Thus, we recommend that “sector-ACLs” be added throughout section 310(g) to enhance the plain-language reading of the section. In addition, we suggest changes to 310(g)(3) to encourage the use of overage adjustments to counter the biological consequences of ACL exceedance. For stocks in rebuilding plans, we additionally clarify that overage adjustments are likely necessary unless the best scientific information available suggests the overage is due to higher than expected recruitment and abundance.

¹⁴⁵ NOAA Fisheries “Red-line document,” 600.310(f)(4)(ii), p 16.

6.3 ACL provisions should retain the concept of sector-specific ACLs for set-asides and the exemption for species with short life cycles should be clarified.

In §310(f)(4)(ii) of the proposed guidelines, we suggest retaining language clarifying that sector-ACLs can be used for set asides for research and bycatch. These set-asides are important management tools to account for all sources of mortality in the catch-setting process.

In § 310(h)(1), the agency should include the concept of an “unfished population” in its definition for species that are exempt from ACL requirements based on the short life cycle exception in the Magnuson-Stevens Act. Fishing pressure is known to truncate the life cycle of species. Thus, it is inappropriate to create a situation where excessive fishing would modify the biological parameters of the stock such that it became exempt from ACLs. Species with relatively short life cycles, like forage fish, still need management that accounts for their role in the ecosystem.

6.4 All sources of mortality should be considered when setting status determination criteria.

In § 310(e)(2)(ii)(C), we recommend agency remove weakening language suggesting that all sources of mortality should only be considered where practicable. Councils must consider all sources of mortality when determine the status of the stock, setting catch levels, and determining OY.

6.5 Data-limited methodologies should be encouraged.

We support the additional language on the use of alternative types of SDCs for data-limited fisheries. These changes are particularly important to the U.S. Caribbean region, where data is limited and alternatives to the conventional MSY-based status determination criteria are sorely needed. However, we caution that the agency ensure it is not discouraging the use of the best data-limited techniques. This is an area ripe for technical guidance from the agency, and the regional Councils need more support from the science centers on how to use techniques that incorporate the life history, geographic range, and the biology of stocks to reduce the uncertainty of stock statuses.

6.6 The PR weakens the position of the U.S. in international negotiations.

We are concerned that some of the proposed revisions related to internationally fished stocks are ambiguous and thus may be confusing for U.S. negotiators at international fisheries bodies, domestic managers who implement internationally negotiated measures, and stakeholders in international fisheries.

Ideally, U.S. domestic regulations and international fishery management organizations would establish the same SDCs for each stock. However, in cases where the SDCs for defining overfished and overfishing of a stock are inconsistent between U.S. domestic regulations and the international bodies charged with managing that stock, the U.S. should use the more conservative SDCs.

Merely saying that “the Council *may* decide to use the SDCs defined by the relevant international body” as suggested by the PR leaves significant room for interpretation by the Council. We believe the language should direct the Council to adhere to the more conservative approach when deciding whether or not to manage a species as overfished or experiencing overfishing. This clarification would save the Council from having to make a decision on how to act when either the Secretary or an international body on which U.S. scientists sit determine a stock to be overfished or experiencing overfishing, while

the other does not. Often, these conflicts are a result of legal language, rather than scientific agreement, and a clarification here would prove to be very useful.

To illustrate how conflicting domestic vs. international SDCs compromise resource management, we highlight two recent cases where the inconsistent definitions have delayed conservation and management action.

- Pacific bluefin tuna: the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) has considered this species to be overfished since at least 2010. Prior to that time, stock assessments were not available to the public. However, despite the stock being assessed at 88% of B_{MSY} in 2010, the Secretary did not find it to be overfished based on a MSST of $0.75 * B_{MSY}$ unilaterally set by the U.S. This disconnect delayed action by the Pacific Fishery Management Council to reduce U.S. fishing mortality on the species, as well as U.S. advocacy in the international arena for a Pacific-wide rebuilding plan, even though the species was internationally recognized as overfished and U.S. scientists take part in ISC stock assessments. Two years later, the stock was assessed to be at just 4% of unfished levels, and the Secretary finally declared Pacific bluefin as overfished in the 2013 Annual Report to Congress on the Status of the Stocks, acknowledging “stock size was estimated well below its threshold during a recent assessment.”¹⁴⁶ If the overfished SDC had been B_{MSY} as in the international realm, management action to halt stock decline could have been initiated by the U.S. earlier.
- Western and Central Pacific bigeye tuna: the stock is currently considered to be overfished by the Scientific Committee of the Western and Central Pacific Fisheries Commission (WCPFC). The 2014 stock assessment found spawning biomass has been reduced to only 16% of unfished levels or 77% of SSB_{MSY} , and the population continues to decline. According to the WCPFC, these results not only classify bigeye tuna as overfished, but also as in violation of the agreed limit reference point of 20% of unfished levels. However, under the current U.S. definition of the bigeye MSST ($0.5 * B_{MSY}$), the Secretary has not declared the stock to be overfished, and the Western Pacific Fisheries Management Council has recently developed policies that set new bigeye tuna quotas for U.S. Pacific Territories and create a system under which they may be transferred to Hawaii-based fishing operations. These policies effectively allow a near doubling of the actual U.S. catch of bigeye tuna, in direct contravention of the intent of the Conservation and Management Measures of the WCPFC.

Additionally, the proposed addition at §310(e)(3)(iv)(D) may be open to opposing interpretations, potentially placing the OY subparagraphs in conflict with each other. It can be interpreted in two different ways: 1) that the U.S. should advocate for catch levels consistent with optimum yield when negotiating at international fisheries management bodies; or 2) that whatever an international fisheries management body sets as the catch level would be defined in the U.S. as optimal. The first interpretation would be a useful improvement to the NS1 guidelines but would need to be clarified in the language. However, if the second interpretation is the one intended, it could lead to competing definitions of OY in the national standards, particularly if an international body’s requirement for consensus forces the U.S. to agree to catch levels that would otherwise not be considered optimal by U.S. regulations. This could set a dangerous precedent by defining risk-prone levels as optimal. Therefore, we suggest alternative language that clarifies the intent of the paragraph and directs officials to seek OY when negotiating catch levels at the international level.

¹⁴⁶ NOAA Fisheries. Status of Stocks 2013 Annual Report to Congress on the Status of U.S. Fisheries. (2014) http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/archive/2013/status_of_stocks_2013_web.pdf.

We therefore suggest the following changes:

§310(e)(2)(ii) –

(ii) *Specification of SDC and overfishing and overfished determinations.* Each FMP must describe how objective and measurable SDCs will be specified, as described in paragraphs (e)(2)(ii)(A) and (B) of this section. To be measurable and objective, SDC must be expressed in a way that enables the Council to monitor the status of each stock or stock complex in the FMP, ~~and determine annually, if possible, whether.~~ Applying the SDC set forth in the FMP, the Secretary determines annually if overfishing is occurring and whether the stock or stock complex is overfished. (Magnuson-Stevens Act section 304(e)). SDCs are often based on fishing rates or biomass levels associated with MSY or MSY based proxies. When data are not available to specify SDCs based on MSY or MSY proxies, alternative types of SDCs that ~~promote~~ ensure sustainability of the stock or stock complex can be used. For example, SDC could be based on ~~recent average catch,~~ fish densities derived from visual census surveys, length/weight frequencies, ~~depletion-based methods,~~ or other ~~data-limited methods.~~ In specifying SDC, a Council must provide an analysis of how the SDC were chosen and how they relate to reproductive potential. ~~Each FMP must specify, to the extent possible, objective and measurable SDC as follows (see paragraphs (e)(2)(ii)(A) and (B) of this section): of stocks of fish within the fishery.~~ If alternative types of SDCs are used, the Council ~~should~~ must explain how the approach will promote sustainability of the stock or stock complex on a long term basis, supporting this explanation with quantitative evidence of the performance of this approach. A Council should consider a process that allows SDCs to be quickly updated to reflect the best scientific information available. In the case of internationally-managed stocks, the Council ~~may decide to~~ shall use the SDCs defined by the relevant international body if they are more conservative. In this instance, the SDCs should allow the Council to monitor the status of a stock or stock complex, recognizing that the SDCs may not be defined in such a way that a Council could monitor the MFMT, OFL, or MSST as would be done with a domestically managed stock or stock complex.

§310(e)(3)(iv)(D) -

(D) For internationally-managed stocks, fishing levels that are agreed upon by the U.S. at the international level ~~must be consistent with achieving OY, if OY represents the most conservative level.~~ ~~are consistent with achieving OY.~~

6.7 It is appropriate to discontinue rebuilding plans that were never necessary due to a determination that the stock was not overfished.

When new information with greater accuracy shows that a rebuilding plan was not necessary because the stock was not overfished, it is appropriate to discontinue the rebuilding plan. However, we suggest a small change that will ensure that, should the new information show that the stock was not overfished in the year of its determination but it was overfished in subsequent years, a rebuilding plan is still appropriate. Thus, we recommend the following change to §600.310(j)(5):

(5) *Discontinuing a rebuilding plan based on new scientific information.* A Council may discontinue a rebuilding plan for a stock or stock complex before it reaches B_{msy} , if all of the following criteria are met:

- (i) The Secretary determines that the stock was not overfished in the year that the overfished determination (see MSA section 304(e)(3)) was based on or any subsequent years; and
- (ii) The biomass of the stock is not currently below the MSST.

6.8 Emergency measure guidelines should be significantly altered.

The agency's proposal to only address emergency actions and interim measures in the context of rebuilding plans is confusing and conveys an inaccurately narrow interpretation of the agency's authority. Under the Magnuson-Stevens Act, the agency has authority to enact emergency regulations as well as authority to enact interim measures to reduce overfishing regardless whether a stock is in a rebuilding plan or has been declared overfished. Moreover, the agency does not need to demonstrate special urgency akin to an emergency situation in order to enact interim measures to reduce overfishing. The agency may take these actions on its own or in response to a request from the Council. In addition, the proposed language deletes useful guidance as to the effects of such action on public notice requirements and the duration of emergency rules and interim measures. We propose new language for §600.310(j)(4) to clarify the situations in which the agency may exercise its authorities, the use of existing criteria for emergency actions instead of new and unsubstantiated criteria, and the restoration of useful language from the current NS1 guidelines.

Section 7 – Conclusion

In many places, the PR jeopardizes the progress made in preventing overfishing, rebuilding vulnerable fish populations, and implementing ACLs and AMs. It also could lead to many fish populations falling out of, or being denied, management under the Magnuson-Stevens Act due to significant changes in determining which stocks should be included "in the fishery." We have made many suggestions in these comments which are critical to ensure the guidelines are in compliance with the Magnuson-Stevens Act and are necessary to ensure sustainable management of our fishery resources. The PR should not compromise the science-based tools that are showing strong results and are helping to secure the U.S.'s reputation as a global leader in fisheries management.

To summarize, our biggest concerns are that the PR would:

- 1) Increase the risk of overfishing by delaying the implementation of sustainable catch limits in cases where new information suggests the health of the fish population has changed.
- 2) Change proven practices for determining whether overfishing is occurring, further increasing the risk of fishing above sustainable levels.
- 3) Undermine scientifically-based fishing limits by allowing carryover of unused quota without sufficient guidance to prevent overfishing.
- 4) Allow deficient rebuilding plans to continue unchanged indefinitely when overfished stocks fail to rebuild as anticipated, thereby undermining the legal requirement for a rebuilding timeline to be "as short as possible".
- 5) Weaken the criteria for including species in a management plan by allowing political and economic considerations to weigh against biological considerations.

The oceans face significant threats, including changing ocean conditions, episodic environmental or mortality events, habitat destruction, and expanded exploitation of marine resources. Revisions to the

NS1 guidelines must tackle these looming uncertainties and ensure we are managing fisheries well. Instead of increasing the riskiness of management, NOAA Fisheries should incorporate a more comprehensive fishery management approach that considers the impacts of fishing on the wider ocean ecosystem and how changes in the environment impact fishing. Doing so will lead to more informed, integrated decision-making.

Thank you for the opportunity to share our concerns with you.

Sincerely,

A handwritten signature in black ink that reads "Ted Morton". The signature is written in a cursive, slightly slanted style.

Ted Morton
Director
U.S. Oceans - Federal
The Pew Charitable Trusts

A handwritten signature in black ink that reads "Meredith Moore". The signature is written in a cursive, slightly slanted style.

Meredith Moore
Senior Associate
U.S. Oceans - Federal
The Pew Charitable Trusts

Appendix 1 - Top-line recommendations organized according to the PR's structure

This section briefly summarizes many of our recommendations, organized by the format found in the PR. Not all of our comments are addressed in this summary.

NMFS proposal	PCT response
Goals and objectives of fisheries management	We recommend strengthening guidance on management objectives, and encouraging review of whether management is achieving those objectives.
Stocks that require conservation and management	We oppose the “conservation and management” framework as proposed. We offer suggested changes that must be accepted to adequately address our serious concerns; failing the adoption of these changes, we strongly recommend the revisions in the PR be removed and the guidelines should revert back to the current system.
Data limited stocks	We support the inclusion of additional data-limited methodologies.
Stock complexes and indicator stocks	Weakening language should be removed from the stock complex section and indicator stocks should be strengthened to clarify that they should be representative of the most vulnerable species in the complex. In addition, the agency should remove the mixed stock exception, as it is contrary to the law.
Aggregate Maximum Sustainable Yield (MSY) estimates	The use of aggregate MSY should be removed until such time as adequate guidance is available on how to use it in a management context without increasing the risk of overfishing.
Developing a definition for “depleted”	The agency should remove the depleted definition from the proposed rule and include additional consideration of environmental and habitat factors for all rebuilding plans. The agency should restore the existing language defining overfished, MSST, and the use of MSST to determine the status of the stock.
Developing an alternative definition of overfishing to include a multi-year approach	We recommend that the agency remove the section encouraging the use of multi-year periods to determining overfishing status in NS1, and issue strong technical guidance outlining specific, rare cases in which this methodology may be appropriate as an interim measure to deal with situations of extremely high uncertainty. This separate guidance must prevent abuse of the system and appropriately protect species for

	<p>which this would be particularly risky. The primary focus in the guidance should be in attaining the best scientific understanding of the condition of the fishery.</p>
Revising Optimum Yield (OY) guidance	<p>The PR takes positive steps towards connecting OY to the ACL framework, but more should be done to ensure the diverse array of OY considerations are adequately considered and connected to management.</p>
Acceptable biological catch (ABC) and annual catch limit (ACL) guidance	<p>The agency should move the implementation of phase-in from the ABC control rule and to the ACL setting process and include sufficient safeguards, such as AMs, to avoid increasing the risk of overfishing.</p> <p>The agency should move the implementation of carryover from the ABC control rule to the ACL setting process.</p> <p>The agency should more clearly define risk policy and strengthen its guidance on the precautionary levels necessary when setting the ABC. Further, clear descriptions on the role of the SSC and the relationship between ABC and the ACL framework should be added or restored.</p>
Accountability measures	<p>We recommend the agency to add additional language to ensure that the proposed language regarding stocks with an ACL of zero cannot be construed to exempt from NS9 and from the accountability measure and catch accounting requirements.</p>
Establishing annual catch limit (ACL) and accountability measure (AM) mechanisms	<p>The agency should include the concept of an “unfished population” in its definition for species that are exempt from ACL requirements.</p>
Adding flexibility in rebuilding	<p>The agency should close loopholes in the T_{min} definition, further strengthen the use of T_{target}, and provide useful guidance for how T_{max} can be calculated using different methodologies while still achieving rebuilding quickly.</p> <p>The agency must significantly modify the section on adequate progress in rebuilding to ensure that stocks are actually recovering and that managers take necessary actions to give vulnerable populations the conservation they need.</p> <p>When new information with greater accuracy shows that a rebuilding plan was not necessary because the stock was not overfished, it is appropriate to discontinue the rebuilding plan.</p>

Appendix 2 – Blueline

Color coding:

Black text – unchanged from current guidance

Red text – new, proposed language from the agency (additions and subtractions)

Green text – existing guidance moved to a new location in the proposed guidance

Blue text – our suggested language additions and subtractions

§ 600.305 General.

(a) *Purpose*.

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

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

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

(b) *Fishery management objectives*.

(1) Each FMP, whether prepared by a Council or by the Secretary, should identify what the FMP is designed to accomplish (i.e., the management objectives to be attained in regulating the fishery under consideration). **These management objectives should reflect the requirements of the Magnuson-Stevens Act, including preventing overfishing and rebuilding overfished stocks, ensuring conservation of marine ecosystems, protecting essential fish habitat, minimizing bycatch, and achieving optimum yield.** In establishing objectives, Councils balance biological constraints with human needs, reconcile present and future costs and benefits, and integrate the diversity of public and private interests. If objectives are in conflict, ~~priorities should be established among them~~ **the FMP must give priority to preventing overfishing and achieving optimum yield as required by National Standard 1.**

(2) **To reflect the changing needs of the fishery over time, Councils should reassess the management objectives of the fishery on a regular basis.**

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

(4) Councils should evaluate the effectiveness of current management measures in achieving management objectives on a regular basis. In monitoring FMP effectiveness, Councils should use management strategy evaluations, Fishery Ecosystem Plans, risk assessments and risk management, and other appropriate methodologies.

(c) Stocks that require conservation and management.

(1) Magnuson-Stevens Act section 302(h)(1) requires a Council to prepare an FMP for each fishery under its authority that requires (or in other words, is in need of) conservation and management. Not every fishery requires Federal management. Magnuson Stevens Act Section 304(e) requires conservation and management of ~~Aany stocks that are predominately caught in Federal waters~~ within a Council's geographical area of authority and that ~~are overfished or subject to overfishing, or likely to become overfished or subject to overfishing. are considered to require conservation and management.~~ In addition, Section 3(5) of the Act defines the term "conservation and management." Based on this definition, the following non-exhaustive list of factors should be used by a Council when deciding whether additional stocks require conservation and management:

(i) The stock is an important component of the marine environment.

(ii) The need to rebuild, restore, or maintain any fishery resources or the marine environment.

(iii) The need to avoid irreversible or long term adverse effects on fishery resources or the marine environment.

(iv) The stock is caught by the fishery.

(v) The need to ensure a continuing supply of food or other products, as well as ensuring continuing benefits to commercial, recreational or subsistence users. ~~Whether an FMP can improve or maintain the condition of the stocks.~~

~~(iv) The stock is a target of a fishery.~~

~~(v) The stock is important to commercial, recreational, or subsistence users.~~

~~(vi) The fishery is important to the Nation and to the regional economy.~~

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

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

(viii) The needs of a developing fishery, and whether an FMP can foster orderly growth of the fishery and protect marine ecosystems.

~~(x) The extent to which the fishery could be or is already adequately managed by states, by state/Federal programs, by Federal regulations pursuant to other FMPs or international commissions, or by industry self-regulation, consistent with the policies and standards of the Magnuson-Stevens Act.~~

(2) Both target and non-target species described in § 600.305(e)(11) and (12), may require conservation and management and be added to an FMP and, if so, they should be identified at the stock level. When considering adding a new stock to an FMP or keeping an existing stock within an FMP, Councils, in consultation with their SSCs, should prepare a thorough analysis of the factors, and any additional considerations that may be relevant to the particular stock. No single factor is dispositive, but Councils should consider weighting the factors as follows. Factors (c)(1)(i)-(iv) of this section should be considered first, as they address maintaining a fishery resource and the marine environment. See § 1802(5)(A),(B). These factors weigh heavily in favor of including a stock in an FMP. Councils should next consider factors (c)(1)(v)-(ix) of this section, which set forth key economic, social, and other reasons contained within the MSA for an FMP action. See 16 U.S.C. §1802(5)(B). Regardless of whether any of the first nine factors

indicates a conservation and management need, a Council should consider factor (c)(1)(x) of this section before deciding to include or maintain a stock in an FMP. In many some circumstances, adequate management of a fishery by states, state/Federal programs, or another Federal FMP would eliminate the need for weigh heavily against a Federal FMP action. See, e.g., 16 U.S.C. § 1851(a)(7); 1856(a)(3). In evaluating the above criteria, a Council should consider the specific circumstances of a fishery, based on the best scientific information available, and provide a detailed explanation for how the above factors were considered in making a final determination. ; to determine whether there are biological, economic, social and/or operational concerns that can be addressed by Federal management.

(3) Councils may choose to identify include stocks that do not require conservation and management within their FMPs as ecosystem component (EC) species (see § 600.305(e)(13) and 600.310(d)(12)) if they do not require conservation and management. EC species may be identified at the species or stock level, and may be grouped into complexes. Consistent with National Standard 9, MSA section 303(b)(12), and other applicable MSA sections, management measures can be adopted in order to, for example, collect data on the EC species, minimize bycatch or bycatch mortality of EC species, protect the associated role of EC species in the ecosystem, or for other reasons.

(4) A stock or stock complex may be identified in more than one FMP. In this situation, the relevant Councils should choose which FMP will be the primary FMP in which reference points for the stock or stock complex are established. In other FMPs, the stock or stock complex may be identified as “other managed stocks” and management measures that are consistent with the objectives of the primary FMP can be established.

(5) Councils should periodically regularly review their FMPs and the best scientific information available and determine if the stocks are appropriately identified. As appropriate, stocks should be reclassified within a FMP, added to or removed from an existing FMP, or added to a new FMP, through a FMP amendment that documents the rationale for the decision.

(d) *Relationship between National Standards— General.* National Standard 1 establishes the requirement to prevent overfishing and achieve optimum yield, and must be achieved in all cases. National Standards 2 through 10 do not alter the requirement of National Standard 1, but instead provide further considerations to be taken into account in the course of satisfying the conservation mandate of National Standard 1. Guidelines for the National Standards are provided in §§ 600.310 – 600.355. Below is a description of how some of the other National Standards intersect with National Standard 1 each other.

(1) *National Standard 1* (see § 600.310). National Standard 1 requires that FMPs prevent overfishing while achieving optimum yield on a continuing basis. Priority must be given to the conservation requirements embodied in National Standard 1 when resolving any perceived tension among various requirements set forth in the national standards.

(2) *National Standard 2* (see § 600.315). All management measures and reference points to implement NS1 the national standards must be based on the best scientific information available. When data are insufficient to estimate reference points directly, Councils should develop reasonable proxies to the extent possible (also see paragraph see paragraph see § 600.310(e)(1)(iv)(B) of this section). In cases where scientific data are severely limited, effort should also be directed to identifying and gathering the needed data. SSCs should shall advise their Councils regarding the best scientific information available for fishery management decisions.

(3) *National Standard 3* (see § 600.320). Reference points should generally be specified in terms of the level of stock aggregation for which the best scientific information is available (also

~~see paragraph (e)(1)(iii) of this section). Also, scientific assessments must be based on the best information about the total range of the stock and potential biological structuring of the stock into biological sub-units, which may differ from the geographic units on which management is feasible. § 600.310(e)(1)(ii) and (iii) of this section).~~

~~(34) National Standard 6~~ (see § 600.335). Councils must build into the reference points and control rules appropriate consideration of risk, taking into account uncertainties in estimating harvest, stock conditions, life history parameters, or the effects of environmental factors.

~~(45) National Standard 8~~ (see § 600.345). National Standard 8 ~~directs the Councils to apply~~addresses economic and social ~~factors towards sustained participation of fishing communities~~considerations and ~~minimizing~~ to the extent practicable, ~~minimize~~ adverse economic impacts on ~~such~~fishing communities ~~within the context of~~ while preventing overfishing and rebuilding overfished stocks as required under National Standard 1. ~~Therefore, calculation~~ Calculation of OY as reduced from MSY ~~should include~~also includes consideration of economic and social factors, but the combination of management measures chosen to achieve the OY must principally be designed to prevent overfishing and rebuild overfished stocks.

~~(56) National Standard 9~~ (see § 600.350). Evaluation of stock status with respect to reference points must take into account mortality caused by bycatch. In addition, the estimation of catch should include the mortality of fish that are discarded.

~~(ede)~~ Word usage— ~~within the National Standard Guidelines~~. The word usage refers to all regulations in this subpart.

(1) *Must* is used, instead of “shall”, to denote an obligation to act; it is used primarily when referring to requirements of the Magnuson-Stevens Act, the logical extension thereof, or of other applicable law.

(2) *Shall* is used only when quoting statutory language directly, to avoid confusion with the future tense.

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

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

~~(5) *May not* is proscriptive; it has the same force as “must not.”~~

~~(6)~~(5) *Will* is used descriptively, as distinguished from denoting an obligation to act or the future tense.

~~(7)~~(6) *Could* is used when giving examples, in a hypothetical, permissive sense.

~~(8)~~(7) *Can* is used to mean “is able to,” as distinguished from “may.”

~~(9)~~(8) *Examples* are given by way of illustration and further explanation. They are not inclusive lists; they do not limit options.

~~(10)~~(9) *Analysis*, as a paragraph heading, signals more detailed guidance as to the type of discussion and examination an FMP should contain to demonstrate compliance with the standard in question.

~~(11)~~(10) *Council* includes the Secretary, as applicable, when preparing FMPs or amendments under section 304(c) and (g) of the Magnuson-Stevens Act.

~~(12) *Stock or stock complex* is used as a synonym for “fishery” in the sense of the Magnuson-Stevens Act's first definition of the term; that is, as “one or more stocks of fish that can be treated as a unit for purposes of conservation and management and that are identified on the basis of geographic, scientific, technical, recreational, or economic characteristics,” as distinguished from the Magnuson-Stevens Act's second definition of fishery as “any fishing for such stocks.”~~

(11) *Target stocks* are stocks or stock complexes that fishers seek to catch for sale or personal use, including “economic discards” as defined under Magnuson-Stevens Act section 3(9).

(12) “*Non-target species*” and “*non-target stocks*” are fish caught incidentally during the pursuit of target stocks in a fishery, including “regulatory discards” as defined under Magnuson-Stevens Act section 3(38). They may or may not be retained for sale or personal use. Some non-target species may be identified in an FMP as ecosystem component (EC) species or stocks.

(13) “*Ecosystem component (EC) species*” are species which are:

- (i) A non-target species or non-target stock;
- (ii) Not be determined to be subject to overfishing, approaching overfished, or overfished;
- (iii) Not be likely to become subject to overfishing or overfished, according to the best available information, in the absence of conservation and management measures; and
- (iv) Not generally be retained for sale or personal use.

§ 600.310 National Standard 1—Optimum Yield.

(a) *Standard 1.* Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield (OY) from each fishery for the U.S. fishing industry.

(b) *General.*

(1) The guidelines set forth in this section describe fishery management approaches to meet the objectives of National Standard 1 (NS1), and include guidance on:

- (i) Specifying maximum sustainable yield (MSY) and OY;
- (ii) Specifying status determination criteria (SDC) so that overfishing and overfished determinations can be made for stocks and stock complexes that ~~are part of a fishery~~ require, or are in need of, conservation and management;
- (iii) Preventing overfishing and achieving OY, incorporation of scientific and management uncertainty in control rules, and adaptive management using annual catch limits (ACL) and measures to ensure accountability (~~AM~~); i.e., accountability measures (AMs)); and
- (iv) Rebuilding stocks and stock complexes.

(2) *Overview of Magnuson-Stevens Act concepts and provisions related to NS1—*

- (i) *MSY.* The Magnuson-Stevens Act establishes MSY as the basis for fishery management and requires that: The fishing mortality rate ~~does~~ must not jeopardize the capacity of a stock or stock complex to produce MSY; the abundance of an overfished stock or stock complex ~~must~~ be rebuilt to a level that is capable of producing MSY; and OY ~~must~~ not exceed MSY.
- (ii) *OY.* The determination of OY is a decisional mechanism for resolving the Magnuson-Stevens Act's conservation and management objectives, achieving a fishery management plan's (FMP) objectives, and balancing the various interests that comprise the greatest overall benefits to the Nation. OY is based on MSY as reduced under paragraphs (e)(3)(iii)(A) and ~~(iv)B~~ of this section. The most important limitation on the specification of OY is that the choice of OY and the conservation and management measures proposed to achieve it must prevent overfishing.
- (iii) *ACLs and AMs.* Any FMP ~~which is prepared by any Council~~ shall establish a mechanism for specifying ACLs in the FMP (including a multiyear plan), implementing regulations, or annual specifications, at a level such that overfishing does not occur in the fishery, including measures to ensure accountability (Magnuson-Stevens Act section 303(a)(15)). ~~Subject to certain exceptions and circumstances described in paragraph (h) of this section, this requirement takes effect in fishing year 2010, for fisheries determined subject to overfishing, and in fishing year 2011, for all other fisheries (Magnuson-Stevens Act section 303 note). "Council" includes the Regional Fishery Management Councils and the Secretary of Commerce, as appropriate (see § 600.305(c)(11)).~~
- (iv) *Reference points.* SDC, MSY, OY, acceptable biological catch (ABC), and ACL, which are described further in paragraphs (e) and (f) of this section, are collectively referred to as "reference points."
- (v) *Scientific advice.* The Magnuson-Stevens Act has requirements regarding scientific and statistical committees (SSC) of the Regional Fishery Management Councils, including but not limited to, the following provisions: ~~(paragraphs (b)(2)(v)(A)-(D) of this section).~~ See the National Standard 2 guidelines for further guidance on SSCs and the peer review process (§ 600.315).

- (A) Each Regional Fishery Management Council shall establish an SSC as described in section 302(g)(1)(A) of the Magnuson-Stevens Act.
- (B) Each SSC shall provide its Regional Fishery Management Council recommendations for ABC as well as other scientific advice, as described in Magnuson-Stevens Act section 302(g)(1)(B).
- (C) The Secretary and each Regional Fishery Management Council may establish a peer review process for that Council for scientific information used to advise the Council about the conservation and management of a fishery (see Magnuson-Stevens Act section 302(g)(1)(E)). If a peer review process is established, it should investigate the technical merits of stock assessments and other scientific information **to be** used by the SSC or agency or international scientists, as appropriate. For Regional Fishery Management Councils, the peer review process is not a substitute for the SSC and should work in conjunction with the SSC. For the Secretary, which does not have an SSC, the peer review process should provide the scientific information necessary.
- (D) Each Council shall develop ACLs for each of its managed fisheries that may not exceed the “fishing level recommendations” of its SSC or peer review process (Magnuson-Stevens Act section 302(h)(6)). The SSC recommendation that is the most relevant to ACLs is ABC, as both ACL and ABC are levels of annual catch.

(3) *Approach for setting limits and accountability measures, including targets, for consistency with NS1.* ~~In general, when~~ **When** specifying limits and accountability measures **intended to avoid overfishing and achieve sustainable fisheries** ~~intended to avoid overfishing and achieve sustainable fisheries~~, Councils must take an approach that considers uncertainty in scientific information and management control of the fishery. These guidelines describe how ~~to the~~ **Councils could** address uncertainty such that there is a low risk that limits are exceeded as described in paragraphs (f)(42) and ~~(f)(6g)(4)~~ of this section.

~~(410)~~ **Vulnerability.** A stock's vulnerability to fishing pressure is a combination of its productivity, which depends upon its life history characteristics, and its susceptibility to the fishery. Productivity refers to the capacity of the stock to produce MSY and to recover if the population is depleted **or overfished**, and susceptibility is the potential for the stock to be impacted by the fishery, which includes direct captures, as well as indirect impacts to the fishery (e.g., loss of habitat quality).

(c) *Summary of items to include in FMPs related to NS1.* This section provides a summary of items that Councils must include in their FMPs and FMP amendments in order to address ACL, AM, and other aspects of the NS1 guidelines. ~~As described in further detail in paragraph (d) of this section, Councils may review their FMPs to decide if all stocks are “in the fishery” or whether some fit the category of “ecosystem component species.”~~ Councils must **also** describe fisheries data for the stocks, ~~and~~ stock complexes, **and ecosystem component species** in their FMPs, or associated public documents such as Stock Assessment and Fishery Evaluation (SAFE) Reports. For all stocks and stock complexes that **are “in the fishery”** (see paragraph (d)(2) of this section), **require conservation and management** (see § 600.305(c)), the Councils must evaluate and describe the following items in their FMPs and amend the FMPs, if necessary, to align their management objectives to end or prevent overfishing **and to achieve OY**:

- (1) MSY and SDC (see paragraphs (e)(1) and (2) of this section).
- (2) OY at the stock, stock complex, or fishery level and provide the OY specification analysis (see paragraph (e)(3) of this section).
- (3) ABC control rule (see paragraph (f)(42) of this section).

(4) Mechanisms for specifying ACLs and sector-ACLs if needed and possible sector-specific ACLs in relationship to the ABC (see paragraphs (f)(5) and (h4) of this section).

(5) AMs (see paragraphs (g) and (h)(1) of this section).

(6) Stocks and stock complexes that have statutory exceptions from ACLs and AMs (see paragraph (h)(21) of this section) or which fall under limited circumstances which require different approaches to meet the ACL Magnuson-Stevens Act requirements (see paragraph (h)(32) of this section).

(d) ~~Classifying stocks in an FMP. Stocks and stock complexes—~~

~~(1) Introduction. Magnuson-Stevens Act section 303(a)(2) requires that an FMP contain, among other things, a description of the species of fish involved in the fishery. As described in § 600.305(c), Councils should identify in their FMPs the stocks that require conservation and management. Such stocks must have ACLs, other reference points, and accountability measures. Other stocks that are identified in an FMP (i.e., ecosystem component species or stocks that the fishery interacts with but are managed primarily under another FMP, see § 600.305(c)(3)-(4)) do not require ACLs, other reference points, and accountability measures.~~

~~(1) Introduction. Magnuson-Stevens Act section 303(a)(2) requires that an FMP contain, among other things, a description of the species of fish involved in the fishery. The relevant Council determines which specific target stocks and/or non-target stocks to include in a fishery. This section provides that a Council may, but is not required to, use an “ecosystem component (EC)” species classification. As a default, all stocks in an FMP are considered to be “in the fishery,” unless they are identified as EC species (see § 600.310(d)(5)) through an FMP amendment process.~~

~~(2) Stocks in a fishery. Stocks in a fishery may be grouped into stock complexes, as appropriate. Requirements for reference points and management measures for these stocks are described throughout these guidelines.~~

~~(2) Ecosystem component (EC) species.~~

(i) Occasional retention of a species would not, in and of itself, preclude consideration of the species under the EC classification. In addition to the general factors noted in § 600.305(e)(13), it is important to consider whether use of the EC species classification in a given instance is consistent with MSA conservation and management requirements.

(ii) EC species may be identified at the species or stock level, and may be grouped into complexes. EC species may, but are not required to, be included in an FMP or FMP amendment for any of the following reasons: For data collection purposes; for ecosystem considerations related to specification of OY for the associated fishery; as considerations in the development of conservation and management measures for the associated fishery; and/or to address other ecosystem issues. Councils should consider measures for the fishery to minimize bycatch and bycatch mortality of EC species consistent with National Standard 9, and to protect their associated role in the ecosystem. EC species do not require specification of reference points but should be monitored to the extent that any new pertinent scientific information becomes available (e.g., catch trends, vulnerability, etc.) to determine changes in their status or their vulnerability to the fishery.

~~(6) Reclassification. A Council should monitor the catch resulting from a fishery on a regular basis to determine if the stocks and species are appropriately classified in the FMP. If the criteria previously used to classify a stock or species is no longer valid, the Council should reclassify it through an FMP amendment, which documents rationale for the decision.~~

~~(7) Stocks or species identified in more than one FMP. If a stock is identified in more than one fishery, Councils should choose which FMP will be the primary FMP in which management~~

objectives, SDC, the stock's overall ACL and other reference points for the stock are established. Conservation and management measures in other FMPs in which the stock is identified as part of a fishery should be consistent with the primary FMP's management objectives for the stock.

~~(8) Stock complex.~~ "Stock complex" means a group of stocks that are sufficiently similar in geographic distribution, life history, and vulnerabilities to the fishery such that the impact of management actions on the stocks is similar.

~~(32) Stock complex.~~ Stocks that require conservation and management can be grouped into stock complexes. A "stock complex" is a tool to manage a group of stocks within a FMP.

(i) At the time a stock complex is established, the FMP should provide, ~~to the extent practicable,~~ a full and explicit description of the proportional composition of each stock in the stock complex, ~~to the extent possible.~~ Stocks may be grouped into complexes for various reasons, including where stocks in a multispecies fishery cannot be targeted independent of one another ~~and MSY cannot be defined on a stock-by-stock basis (see paragraph (e)(1)(iii) of this section);~~ where there is insufficient data to measure ~~their~~ stock's status relative to SDC; or when it is not feasible for fishermen to distinguish individual stocks among their catch. ~~Where practicable,~~ ~~†~~The group of stocks should have a similar geographic distribution, life history characteristics, and vulnerabilities to fishing pressure such that the impact of management actions on the stocks is similar. The vulnerability of ~~individual~~ stocks ~~to the fishery~~ should be ~~evaluated~~ considered, based on the best scientific information available, when determining if a particular stock complex should be established or reorganized, or if a particular stock should be included in a complex. ~~Stock complexes may be comprised of: one or more indicator stocks, each of which has SDC and ACLs, and several other stocks; several stocks without an indicator stock, with SDC and an ACL for the complex as a whole; or one of more indicator stocks, each of which has SDC and management objectives, with an ACL for the complex as a whole (this situation might be applicable to some salmon species).~~ Councils must provide a comprehensive analysis and demonstrate within their FMP how overfishing will be prevented if stock complexes are used.

~~(9)~~ii) *Indicator stocks.*

(A) An indicator stock is a stock with measurable ~~and objective~~ SDC that can be used to help manage and evaluate more poorly known stocks that are in a stock complex.

(B) ~~Where practicable,~~ ~~s~~Stock complexes should include one or more indicator stocks (each of which has SDC and ACLs). Otherwise, stock complexes may be comprised of: several stocks without an indicator stock (with SDC and an ACL for the complex as a whole), providing that Councils work with their SSCs to identify indicator stocks as soon as possible, or one or more indicator stocks (each of which has SDC and management objectives) with an ACL for the complex as a whole (this situation might be applicable to some salmon species). Councils, ~~should~~ in consultation with their SSCs, must review the available quantitative or qualitative information (e.g., catch trends, changes in vulnerability, fish health indices, etc.) of stocks within a complex on a regular basis to determine if they are being sustainably managed, whether stocks in the complex have similar vulnerabilities, and to ensure that overfishing of stocks within the complex is prevented.

(C) If an indicator stock is used to evaluate the status of a complex, it ~~should~~ must be representative of the ~~typical status/vulnerability of each stock most~~ vulnerable stocks within the complex, ~~due to similarity in vulnerability.~~ If the

stocks within a stock complex have a wide range of vulnerability, they should be reorganized into different stock complexes that have similar vulnerabilities; ~~otherwise the indicator stock should be chosen to represent the more vulnerable stocks within the complex.~~ In instances where the vulnerability of stocks in a complex is subject to scientific uncertainty, ~~an indicator stock is less vulnerable than other members of the complex,~~ management measures ~~need to should~~ must be more conservative so that the more vulnerable members of the complex are not at risk from the fishery.

(D) More than one indicator stock can be selected to provide more information about the status of the complex. ~~When indicator stock(s) are used, periodic re-evaluation of available quantitative or qualitative information (e.g., catch trends, changes in vulnerability, fish health indices, etc.) is needed to determine whether a stock is subject to overfishing, or is approaching (or in) an overfished condition.~~

(E) When indicator stocks are used, the stock complex's MSY could be listed as "unknown," while noting that the complex is managed on the basis of one or more indicator stocks that do have known stock-specific MSYs, or suitable proxies, as described in paragraph (e)(1)(iv) of this section.

~~(10) Vulnerability. A stock's vulnerability is a combination of its productivity, which depends upon its life history characteristics, and its susceptibility to the fishery. Productivity refers to the capacity of the stock to produce MSY and to recover if the population is depleted, and susceptibility is the potential for the stock to be impacted by the fishery, which includes direct captures, as well as indirect impacts to the fishery (e.g., loss of habitat quality). Councils in consultation with their SSCs, should analyze the vulnerability of stocks in stock complexes where possible.~~

(e) Features of MSY, SDC, and OY—

(1) MSY. Each FMP must include an estimate of MSY for the stocks and stock complexes ~~in that require conservation and management. MSY may also be specified for the fishery, as described in paragraph (d)(2) of this section).~~ ~~a whole.~~

(i) Definitions.

(A) MSY is the largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological, environmental conditions and fishery technological characteristics (e.g., gear selectivity), and the distribution of catch among fleets.

(B) MSY fishing mortality rate (F_{msy}) is the fishing mortality rate that, if applied over the long term, would result in MSY.

(C) MSY stock size (B_{msy}) means the long-term average size of the stock or stock complex, measured in terms of spawning biomass or other appropriate measure of the stock's reproductive potential that would be achieved by fishing at F_{msy} .

(ii) MSY for stocks. MSY should be estimated for each stock based on the best scientific information available (see § 600.315).

(iii) MSY for stock complexes. ~~When stock complexes are used, MSY should be estimated on a stock-by-stock basis whenever possible. However, where MSY cannot be estimated for each stock in a stock complex, then MSY may be estimated~~ on a stock-by-stock basis whenever possible. However, where MSY cannot be estimated for each stock in a stock complex, then MSY may be estimated for one or more indicator stocks ~~for the complex~~ or for the complex as a whole (see paragraph (d)(2)(ii)). In these situations, the MSY should be representative of the most vulnerable species in the complex. ~~When~~

~~indicator stocks are used, the stock complex's MSY could be listed as "unknown," while noting that the complex is managed on the basis of one or more indicator stocks that do have known stock specific MSYs, or suitable proxies, as described in paragraph (e)(1)(iv) of this section. When indicator stocks are not used, MSY, or a suitable proxy, should be calculated for the stock complex as a whole.~~

~~(iv) Methods of estimating MSY for an aggregate group of stocks. Estimating MSY for an aggregate group of stocks (including stock complexes and the fishery as a whole) can be done using models that account for multi-species interactions, composite properties for a group of similar species, common biomass (energy) flow and production patterns, or other relevant factors (see paragraph (e)(3)(iv)(C) of this section).~~

~~(iv)-v) Specifying MSY.~~

~~(A) Because MSY is a long-term average, it need not be estimated annually, but it must be based on the best scientific information available (see § 600.315), but it must be based on the best scientific information available (see § 600.315), and should be re-estimated as required by changes in long-term environmental or ecological conditions, fishery technological characteristics, or new scientific information.~~

~~(B) When data are insufficient to estimate MSY directly, Councils should adopt other measures of reproductive potential, based on the best scientific information available, based on the best scientific information available, that can serve as reasonable proxies for MSY, F_{msy} , and B_{msy} , to the extent possible.~~

~~(C) The MSY for a stock or stock complex is influenced by its interactions with other stocks in its ecosystem and interactions between fisheries, and these interactions may shift as multiple stocks in an ecosystem are fished. These ecological conditions Ecological and environmental information should be taken into account, to the extent possible practicable possible, when assessing stocks and specifying MSY. Ecological conditions and environmental information that is not directly accounted for in the specification of MSY can be among the ecological factors considered when setting OY below MSY.~~

~~(D) As MSY values are estimates or are based on proxies, they will have some level of uncertainty associated with them. The degree of uncertainty in the estimates should be identified, when possible practicable, through the stock assessment process and peer review (see § 600.335), 600.335), and should be taken into account when specifying the ABC Control rule (see paragraph (f)(2) of this section). Where uncertainty cannot be directly calculated, such as when proxies are used, then a proxy for the uncertainty itself should be established based on the best scientific information, including comparison to other stocks.~~

(2) Status determination criteria—

(i) Definitions.

(A) *Status determination criteria (SDC)* mean the **quantifiable measurable and objective** factors, MFMT, OFL, and MSST, or their proxies, that are used to determine if overfishing has occurred, or if the stock or stock complex is overfished. Magnuson-Stevens Act (section 3(34)) defines both "overfishing" and "overfished" to mean a rate or level of fishing mortality that jeopardizes the capacity of a fishery to produce the MSY on a continuing basis. To avoid confusion, this section clarifies that "overfished" relates to biomass of a stock or stock complex, and "overfishing" pertains to a rate or level of removal of fish from a stock or stock complex.

(B) *Overfishing* ~~(to overfish)~~ occurs whenever a stock or stock complex is subjected to a level of fishing mortality or ~~annual~~ annual total catch that jeopardizes the capacity of a stock or stock complex to produce MSY on a continuing basis.

(C) *Maximum fishing mortality threshold (MFMT)* means the level of fishing mortality (F), ~~on an annual basis,~~ on an annual basis, above which overfishing is occurring. The MFMT or reasonable proxy may be expressed either as a single number (a fishing mortality rate or F value), or as a function of spawning biomass or other measure of reproductive potential.

(D) *Overfishing limit (OFL)* means the annual amount of catch that corresponds to the estimate of MFMT applied to a stock or stock complex's abundance and is expressed in terms of numbers or weight of fish. ~~The OFL is an estimate of the catch level above which overfishing is occurring.~~ The OFL is an estimate of the catch level above which overfishing is occurring.

(E) *Overfished.* A stock or stock complex is considered "overfished" when its biomass has declined below ~~MSST, a level that jeopardizes the capacity of the stock or stock complex to produce MSY on a continuing basis,~~ a level that jeopardizes the capacity of the stock or stock complex to produce MSY on a continuing basis.

~~(F) *Depleted.* An overfished stock or stock complex is considered depleted when it has not experienced overfishing at any point over a period of two generation times of the stock and its biomass has declined below MSST, or when a rebuilding stock or stock complex has reached its targeted time to rebuild and the stock's biomass has shown no significant signs of growth despite being fished at or below catch levels that are consistent with the rebuilding plan throughout that period (see paragraphs (j)(3)(i)(B)(2)(i) and (j)(6) of this section).~~

~~(F) *Minimum stock size threshold (MSST)* means the level of biomass below which the capacity of the stock or stock complex is considered to be overfished produce MSY on a continuing basis has been jeopardized (i.e., overfished).~~

~~(G) *H) Approaching an overfished condition.* A stock or stock complex is approaching an overfished condition when it is projected that there is more than a 50 percent chance that the biomass of the stock or stock complex will decline below the MSST within two years.~~

(ii) *Specification of SDC and overfishing and overfished determinations.* Each FMP must describe how objective and measurable SDCs will be specified, as described in paragraphs (e)(2)(ii)(A) and (B) of this section. To be measurable and objective, SDC must be expressed in a way that enables the Council to monitor the status of each stock or stock complex in the FMP, ~~and determine annually, if possible, whether.~~ Applying the SDC set forth in the FMP, the Secretary determines annually if overfishing is occurring and whether the stock or stock complex is overfished. ~~(Magnuson-Stevens Act section 304(e)).~~ SDCs are often based on fishing rates or biomass levels associated with MSY or MSY based proxies. When data are not available to specify SDCs based on MSY or MSY proxies, alternative types of SDCs that promote ensure sustainability of the stock or stock complex can be used. For example, SDC could be based on recent average catch, fish densities derived from visual census surveys, length/weight frequencies, depletion-based methods, or other data-limited methods. In specifying SDC, a Council must provide an analysis of how the SDC were chosen and how they relate to reproductive

potential. ~~Each FMP must specify, to the extent possible, objective and measurable SDC as follows (see paragraphs (e)(2)(iii)(A) and (B) of this section): of stocks of fish within the fishery.~~ If alternative types of SDCs are used, the Council ~~should~~ must explain how the approach will promote sustainability of the stock or stock complex on a long term basis, supporting this explanation with quantitative evidence of the performance of this approach. A Council should consider a process that allows SDCs to be quickly updated to reflect the best scientific information available. In the case of internationally-managed stocks, the Council ~~may decide to~~ should use the SDCs defined by the relevant international body if they are more conservative. In this instance, the SDCs should allow the Council to monitor the status of a stock or stock complex, recognizing that the SDCs may not be defined in such a way that a Council could monitor the MFMT, OFL, or MSST as would be done with a domestically managed stock or stock complex.

(A) ~~SDC to Determine Overfishing Status.~~ Each FMP must describe which of the following two methods will be used for each stock or stock complex to determine an overfishing status. Each FMP must describe the method used to determine the overfishing status for each stock or stock complex. Councils should select a method that is robust to management and scientific uncertainty for that stock or stock complex, and should minimize lag time between the end of a fishing season and a determination of status. For domestically-managed stocks or stocks complexes, one of the following methods should be used:

(1) ~~Fishing Mortality Rate Exceeds MFMT.~~ Exceeding the MFMT for a period of 1 year or ~~more~~ exceeding a multi-year mortality reference point ~~more~~ constitutes overfishing. ~~The MFMT or reasonable proxy may be expressed either as a single number (a fishing mortality rate or F value), or as a function of spawning biomass or other measure of reproductive potential.~~

(2) ~~Catch Exceeds the OFL.~~ ~~Should the annual catch exceed~~ Exceeding the annual OFL for 1 year or ~~more~~, the stock or stock complex is ~~considered subject to~~ exceeding a multi-year catch reference point ~~more~~ constitutes overfishing.

~~(3) Use of Multi-Year Periods to Determine Overfishing Status.~~ A multi-year period may not exceed three years. A Council may develop overfishing SDCs that use a multi-year approach, so long as it provides a comprehensive analysis based on the best scientific information available that supports that the approach will not jeopardize the capacity of the fishery to produce MSY on a continuing basis. A Council should identify in its FMP or FMP amendment circumstances in which the multi-year approach should not be used (e.g., because the capacity of the stock to produce MSY over the longer term could be jeopardized).

(B) ~~SDC to determine overfished status.~~ The MSST or reasonable proxy must be expressed in terms of spawning biomass or other measure of reproductive potential. ~~To the extent possible, the MSST should equal whichever of the following is greater: One half the MSY stock size, or the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years, if the stock or stock complex were exploited at the MFMT specified under paragraph (e)(2)(ii)(A)(1) of this section. Should the estimated size of the stock or stock complex in a given year fall below this threshold, the stock or stock~~

~~complex is considered overfished. MSST should be between $\frac{1}{2} B_{msy}$ and B_{msy} , and could be informed by the life history of the stock, the natural fluctuations in biomass associated with fishing at MFMT over the long term, the time needed to rebuild to B_{msy} and associated social and/or economic impacts on the fishery, the requirements of internationally managed stocks, or other considerations.~~ The MSST should equal whichever of the following is greater: One-half the MSY stock size, or the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years, if the stock or stock complex were exploited at the MFMT specified under paragraph (e)(2)(ii)(A)(1) of this section. Should the estimated size of the stock or stock complex in a given year fall below this threshold, the stock or stock complex is considered overfished. For internationally managed stocks, the MSST should be at least as high as the SDC defined by the international management body to which the United States is a party.

~~(C) Where practicable, a~~ All sources of mortality including that resulting from bycatch, scientific research catch, and all fishing activities ~~should~~ must be accounted for in the evaluation of stock status with respect to reference points.

(iii) *Relationship of SDC to environmental and habitat change.* Some short-term environmental changes can alter the size of a stock or stock complex without affecting its long-term reproductive potential. Long-term environmental changes affect both the short-term size of the stock or stock complex and the long-term reproductive potential of the stock or stock complex.

(A) If environmental changes cause a stock or stock complex to fall below its MSST without affecting its long-term reproductive potential, fishing mortality must be constrained sufficiently to allow rebuilding within an acceptable time frame (~~see also see~~ paragraph (j)(3)(iii) of this section). SDC should not be respecified.

(B) If environmental, ~~ecosystem, or habitat~~ changes affect the long-term reproductive potential of the stock or stock complex, one or more components of the SDC must be respecified. Once SDC have been respecified, fishing mortality may or may not have to be reduced, depending on the status of the stock or stock complex with respect to the new criteria.

(C) If ~~manmade~~ environmental, ~~ecosystem, or habitat~~ changes are partially responsible for a stock or stock complex's biomass being ~~in an overfished condition below MSST (overfished)~~, in addition to controlling ~~fishing~~ mortality from directed fishing and bycatch, Councils should take remedial actions such as recommending protection and restoration of habitat, reevaluating SDCs to determine if they are representative of current environmental conditions, identifying research priorities to improve the Council's understanding of the impediments to rebuilding, or partnering with Federal and state agencies to address non-fishing related impacts, and other ameliorative programs ~~to the extent possible~~ (see also the guidelines issued pursuant to section 305(b) of the Magnuson-Stevens Act for Council actions concerning essential fish habitat).

(iv) *Secretarial approval of SDC.* Secretarial approval or disapproval of proposed SDC will be based on consideration of whether the proposal:

- (A) ~~Has sufficient~~ Is based on the best scientific ~~merit~~ information available;
- (B) Contains the elements described in paragraph (e)(2)(ii) of this section;

(C) Provides a basis for objective measurement of the status of the stock or stock complex against the criteria; and

(D) ~~is~~ is operationally feasible.

(3) *Optimum yield*—For stocks that require conservation and management, OY may be established at the stock, ~~or stock complex, level,~~ or at the fishery level.

(i) *Definitions*—

(A) *Optimum yield (OY)*. Magnuson-Stevens Act section (3)(33) defines “optimum,” with respect to the yield from a fishery, as the amount of fish that will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems; that is prescribed on the basis of the MSY from the fishery, as reduced by any relevant economic, social, or ecological factor; and, in the case of an overfished fishery, that provides for rebuilding to a level consistent with producing the MSY in such fishery. ~~OY cannot exceed MSY in any circumstance. OY may be established at the stock or stock complex level, or at the fishery level.~~

(B) In NS1, use of the phrase “achieving, on a continuing basis, the optimum yield from each fishery” means: producing, from each stock, stock complex, or fishery: ~~a long-term series, an amount of catches such catch that theis, on average catch is,~~ equal to the Council’s specified OY; ~~prevents overfishing while accounting for any necessary reductions from MSY for social, economic, and ecological factors is prevented;~~ maintains the long term average biomass ~~is~~ near or above Bmsy; ~~and rebuilds overfished stocks and stock complexes are rebuilt~~ consistent with timing and other requirements of section 304(e)(4) of the Magnuson-Stevens Act and paragraph (j) of this section.

(ii) *General*. OY is a long-term average amount of desired yield from a stock, stock complex, or fishery. An FMP must contain conservation and management measures, including ACLs and AMs, to achieve OY on a continuing basis, and provisions for information collection that are designed to determine the degree to which OY is achieved. These measures should allow for practical and effective implementation and enforcement of the management regime. ~~The Secretary has an obligation to implement and enforce the FMP.~~ If management measures prove unenforceable—or too restrictive, or not rigorous enough to prevent overfishing while achieving ~~on a continuing basis~~ OY—they should be modified; an alternative is to reexamine the adequacy of the OY specification ~~to ensure that the dual requirements of NS1 are met (preventing overfishing while achieving, on a continuing basis, OY).~~ ~~Exceeding OY does not necessarily constitute overfishing. However, even if no overfishing resulted from exceeding OY, continual harvest at a level above OY would violate NS1, because OY was not achieved on a continuing basis.~~

(iii) *Assessing OY*. An FMP must contain an assessment and specification of OY, ~~including which documents how the OY will~~ account for relevant ecological, economic, and social factors in order to produce the greatest benefits to the nation and prevent overfishing. The assessment ~~should~~ must include a summary of information utilized in making such specification, consistent with requirements of section 303(a)(3) of the Magnuson-Stevens Act. ~~A Council must identify those and as well as accounting for consideration of the~~ economic, social, and ecological factors relevant to management of a particular stock, stock complex, or fishery, ~~and then evaluate them to determine the.~~ Consistent with Magnuson-Stevens Act section 302(h)(5), the assessment and

specification of OY. ~~The choice of a particular OY must be carefully documented to show it is responsive to changing circumstances in the greatest benefit to the Nation and prevent overfishing fishery.~~ ~~should~~ ~~must~~ be carefully reviewed on a continuing basis, so that the OY selected will produce it.

~~(iii)-A) Determining the greatest benefit to the Nation.~~ In determining the greatest benefit to the Nation, the values that should be weighed and receive serious attention when considering the economic, social, or ecological factors used in reducing MSY, ~~or its proxy~~, to obtain OY are:

~~(A)-1) The benefits of food production are derived from providing seafood to consumers; maintaining an economically viable fishery together with its attendant contributions to the national, regional, and local economies; and utilizing the capacity of the Nation's fishery resources to meet nutritional needs.~~

~~(B)-2) The benefits of recreational opportunities reflect the quality of both the recreational fishing experience and non-consumptive fishery uses such as ecotourism, fish watching, and recreational diving. Benefits also include the contribution of recreational fishing to the national, regional, and local economies and food supplies.~~

~~(C)-3) The benefits of protection afforded to marine ecosystems are those resulting from maintaining viable populations (including those of unexploited species), maintaining adequate forage for all components of the ecosystem, maintaining evolutionary and ecological processes (e.g., disturbance regimes, hydrological processes, nutrient cycles), maintaining productive habitat, maintaining the evolutionary potential of species and ecosystems, and accommodating human use.~~

~~(iv)-B) Economic, Ecological, and Social Factors. Factors to consider in OY specification. Councils should consider set the management objectives of their FMPs to achieve OY. These management objectives and the resulting and their management framework to determine should identify the relevant social, economic, and ecological factors used to determine OY. To the extent possible, these factors should be quantified and reviewed in historical, short-term, and long-term contexts. Even when quantification is not possible, the FMP should still address these social, economic and ecological factors in its OY determination. There will be inherent trade-offs when determining the objectives of the fishery.~~

~~Because fisheries have limited capacities, any attempt to maximize the measures of benefits described in paragraph (e)(3)(iii) of this section will inevitably encounter practical constraints. OY cannot exceed MSY in any circumstance, and must take into account the need to prevent overfishing and rebuild overfished stocks and stock complexes. OY is prescribed on the basis of MSY as reduced by social, economic, and ecological factors. To the extent possible, the relevant social, economic, and ecological factors used to establish OY for a stock, stock complex, or fishery should be quantified and reviewed in historical, short term, and long term contexts. Even where quantification of social, economic, and ecological factors is not possible, the FMP still must address them in its OY specification. The following is a non-exhaustive list of potential considerations for each factor. An FMP must address each factor but not necessarily each example-social, economic, and ecological factors.~~

~~(A)-1~~ *Social factors*. Examples are enjoyment gained from recreational fishing, avoidance of gear conflicts and resulting disputes, preservation of a way of life for fishermen and their families, and dependence of local communities on a fishery (e.g., involvement in fisheries and ability to adapt to change). Consideration may be given to fishery-related indicators (e.g., number of fishery permits, number of commercial fishing vessels, number of party and charter trips, landings, ex-vessel revenues etc.) and non-fishery related indicators (e.g., unemployment rates, percent of population below the poverty level, population density, etc.), **and preference for a particular type of fishery (e.g., size of the fishing fleet, type of vessels in the fleet, permissible gear types)**. Other factors that may be considered include the effects that past harvest levels have had on fishing communities, the cultural place of subsistence fishing, obligations under Indian treaties, proportions of affected minority and low-income groups, and worldwide nutritional needs.

~~(B)-2~~ *Economic factors*. Examples are prudent consideration of the risk of overharvesting when a stock's size or reproductive potential is uncertain (see § 600.335(c)(2)(i)), satisfaction of consumer and recreational needs, and encouragement of domestic and export markets for U.S. harvested fish. Other factors that may be considered include: the value of fisheries, the level of capitalization, the decrease in cost per unit of catch afforded by an increase in stock size, the attendant increase in catch per unit of effort, alternate employment opportunities, and economic contribution to fishing communities, coastal areas, affected states, and the nation.

~~(C)-3~~ *Ecological factors*. Examples include impacts on ecosystem component species, forage fish stocks, other fisheries, predator-prey or competitive interactions, marine mammals, threatened or endangered species, and birds. Species interactions that have not been explicitly taken into account when calculating MSY should be considered as relevant factors for setting OY below MSY. **Other factors include considering the value of distributed age structure, species diversity, and food web structure and function.** In addition, consideration should be given to managing forage stocks for higher biomass than B_{msy} to enhance and protect the marine ecosystem, **along with consideration of threshold levels below which no fishing should occur on forage stocks to preserve ecosystem function.** Also important are ecological or environmental conditions that stress marine organisms **or their habitat**, such as natural and manmade changes in wetlands or nursery grounds, and effects of pollutants on habitat and stocks. **Effects from climate change including warming waters, acidification, shifting ranges of stocks, and altered species and habitat resiliency should be considered.**

~~(v) Specification of OY. (iv) Specifying OY. The specification of OY must be consistent with paragraphs (e)(3)(i)-(iv) of this section.~~ If the estimates of MFM and current biomass are known with a high level of certainty and management controls can accurately limit catch, then OY could be set very close to MSY, assuming no other reductions are necessary for social, economic, or ecological factors. **However, NMFS**

expects that in most cases OY will be reduced from MSY so that OY can be achieved without increasing the risk of overfishing and to account for relevant OY factors. If a Council recommends an OY which is very close to MSY, the Secretary will presume that the proposal would not achieve OY in the absence of sufficient analysis and justification. To the degree that such MSY estimates and management controls are lacking or unavailable, or reductions are necessary to account for social, economic, and ecological factors (including uncertainty regarding these factors) OY should be set farther from MSY. ~~If management measures cannot adequately control fishing mortality so that the specified OY can be achieved without overfishing, the Council should reevaluate the management measures and specification of OY so that the dual requirements of NS1 (preventing overfishing while achieving, on a continuing basis, OY) are met.~~

(A) ~~The amount of fish that constitutes the OY should~~ can be expressed in terms of numbers or weight of fish.

~~(B) Either a range or, and either as a single value or a range. When it is not possible to specify OY quantitatively, OY may be specified for OY-described qualitatively.~~

~~(B)(C) All catch must be counted against OY, including that resulting from bycatch, scientific research, and all fishing activities. All catch must be counted against OY, including that resulting from bycatch, scientific research, and all fishing activities.~~

~~(D) The OY specification should be translatable into an annual numerical estimate for the purposes of establishing any total allowable level of foreign fishing (TALFF) and analyzing impacts of the management regime.~~

~~(E) (B)(C)~~ (C) The determination of OY is based on MSY, directly or through proxy. However, even where sufficient scientific data as to the biological characteristics of the stock do not exist, or where the period of exploitation or investigation has not been long enough for adequate understanding of stock dynamics, or where frequent large-scale fluctuations in stock size diminish the meaningfulness of the MSY concept, OY must still be established based on the best scientific information available.

~~(F) (D)~~ (D) An OY established at a fishery level may not exceed the sum of the MSY values for each of the stocks or stock complexes within the fishery. ~~Aggregate level MSY estimates could be used as a basis for specifying OY for the fishery (see paragraph (e)(1)(iv) of this section). When aggregate level MSY is estimated, single stock MSY estimates can also be used to inform single stock management. For example, OY could be specified for a fishery, while other reference points are specified for individual stocks in order to prevent overfishing on each stock within the fishery.~~

~~(G) There should be a mechanism in the FMP for periodic reassessment of the OY specification, so that it is responsive to changing circumstances in the fishery.~~

~~(H) Part of the OY may be held as a reserve to allow for factors such as uncertainties in estimates of stock size and domestic annual harvest (DAH). If an OY reserve is established, an adequate mechanism should be included in the FMP to permit timely release of the reserve to domestic or foreign fishermen, if necessary.~~

(D) For internationally-managed stocks, fishing levels that are agreed upon by the U.S. at the international level must be consistent with achieving OY, if OY represents the most conservative level. ~~are consistent with achieving OY.~~

(vi) *OY and foreign fishing.* Section 201(d) of the Magnuson-Stevens Act provides that fishing by foreign nations is limited to that portion of the OY that will not be harvested by vessels of the United States. The FMP must include an assessment to address the following, as required by section 303(a)(4) of the Magnuson-Stevens Act:

(A) The OY specification is the basis for establishing any total allowable level of foreign fishing (TALFF).

(B) Part of the OY may be held as a reserve to allow for ~~factors such as uncertainties in estimates of stock size and~~ domestic annual harvest (DAH). If an OY reserve is established, an adequate mechanism should be included in the FMP to permit timely release of the reserve to domestic or foreign fishermen, if necessary.

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

~~(B)-D~~ *Domestic annual processing (DAP).* Each FMP must assess the capacity of U.S. processors. It must also assess the amount of DAP, which is the sum of two estimates: The estimated amount of U.S. harvest that domestic processors will process, which may be based on historical performance or on surveys of the expressed intention of manufacturers to process, supported by evidence of contracts, plant expansion, or other relevant information; and the estimated amount of fish that will be harvested by domestic vessels, but not processed (e.g., marketed as fresh whole fish, used for private consumption, or used for bait).

~~(C)-E~~ *Joint venture processing (JVP).* When DAH exceeds DAP, the surplus is available for JVP.

~~(f) Acceptable biological catch, and annual catch limits, and annual catch targets. The following features (see paragraphs (f)(1) through (f)(5) of this section) of acceptable biological catch and annual catch limits apply to stocks and stock complexes in the fishery (see paragraph (d)(2) of this section).~~

~~(1) Introduction. A control rule is a policy for establishing a limit or target fishing level that is based on the best available scientific information and is established by fishery managers in consultation with fisheries scientists. Control rules should be designed so that management actions become more conservative as biomass estimates, or other proxies, for a stock or stock complex decline and as science and management uncertainty increases. Examples of scientific uncertainty include uncertainty in the estimates of MFMT and biomass. Management uncertainty may include late catch reporting, misreporting, and underreporting of catches and is affected by a fishery's ability to control actual catch. For example, a fishery that has inseason catch data available and inseason closure authority has better management control and precision than a fishery that does not have these features.~~

~~(1)(2) Definitions.~~

(i) *Catch* is the total quantity of fish, measured in weight or numbers of fish, taken in commercial, recreational, subsistence, tribal, and other fisheries. Catch includes fish that are retained for any purpose, as well as mortality of fish that are discarded.

(ii) *Acceptable biological catch (ABC)* is a level of a stock or stock complex's annual catch, which cannot exceed the OFL (see see paragraph (e)(2)(i)(D) of this section). The ABC

which is based on an ABC control rule that accounts for the scientific uncertainty in the estimate of OFL and, any other scientific uncertainty (see paragraph (f)(3) of this section), and should be specified based on the ABC control rule, and the Council's risk policy.

~~(iii) ABC control rule means a specified approach to setting the ABC for a stock or stock complex as a function of the scientific uncertainty in the estimate of OFL and any other scientific uncertainty (see paragraph (f)(4) of this section).~~

~~(iiiiv) Annual catch limit (ACL) is a limit on the level of total annual catch of a stock or stock complex, which cannot exceed the ABC, that is intended to achieve OY on a continuing basis from a stock, stock complex, or a fishery and serves as the basis for invoking AMs. ACL cannot exceed the ABC, but An ACL may be divided into sector-ACLs (see paragraph (f)(54) of this section).~~

~~(v) Annual catch target (ACT) is an amount of annual catch of a stock or stock complex that is the management target of a fishery, and accounts for management uncertainty in controlling the actual catch at or below the ACL. ACTs are recommended in the system of accountability measures so that ACL is not exceeded.~~

~~(vi) ACT control rule means a specified approach to setting the ACT for a stock or stock complex such that the risk of exceeding the ACL due to management uncertainty is at an acceptably low level.~~

~~(iv) Control rule is a policy for establishing a limit or target catch level that is based on the best scientific information available and is established by the Council in consultation with its SSC.~~

~~(v) Management uncertainty refers to uncertainty in the ability of managers to constrain catch so that the ACL is not exceeded, and the uncertainty in quantifying the true catch amounts (i.e., estimation errors). The sources of management uncertainty could include: late catch reporting; misreporting; underreporting of catches; lack of sufficient inseason management, including inseason closure authority; or other factors.~~

~~(vi) Risk policy is a policy created by the Council in collaboration with its SSC that describes an acceptable probability (significantly greater than 50 percent), that catch equal to the stock's ABC will not result in overfishing. Other appropriate methods can be used to define a risk policy as long as they yield similarly risk-averse results. A risk policy should consider the vulnerability of the stock or stock complex (see 310(b)(4)) as well as the economic, social, and ecological consequences between being more or less risk adverse.~~

~~(vii) Scientific uncertainty refers to uncertainty in the information about a stock and its reference points. Sources of scientific uncertainty could include: uncertainty in stock assessment results; uncertainty in the estimates of MFMT, MSST, the biomass of the stock, and OFL; time lags in updating assessments; the degree of retrospective revision of assessment results; uncertainty in projections; uncertainties due to the choice of assessment model; longer-term uncertainties due to potential ecosystem and environmental effects; or other factors. Each Council must account for scientific uncertainty in control rules, based on recommendations from its SSCs.~~

~~(2) ABC control rule.—~~

~~(i) For stocks and stock complexes required to have an ABC, each Council must establish an ABC control rule, based on the scientific advice from its SSC, that accounts for scientific uncertainty in the OFL, any other scientific uncertainty, and the Council's risk policy. The Council's risk policy could be based, on an acceptable probability (at least 50 percent) that catch equal to the stock's ABC will not result in overfishing, but other~~

appropriate methods can be used. When determining the risk policy, Councils could consider the economic, social, and ecological trade-offs between being more or less risk averse. ~~The Council's choice of a risk policy cannot result in an ABC that exceeds the OFL. The process of establishing an ABC control rule must be based on scientific advice from the SSC may could also involve science advisors or the peer review process established under Magnuson-Stevens Act section 302(g)(1)(E). SSC or peer review recommendations should describe relevant uncertainties quantitatively, or if that is not possible, qualitatively. The ACL (which is set by the Council) cannot be greater than the ABC (which is set by the SSC). The ABC cannot be greater than the OFL.~~

(ii) The ABC control rule must articulate how ABC will be set compared to the OFL based on the scientific knowledge about the stock or stock complex and taking into account scientific uncertainty (see paragraph (f)(1)(vi) of this section).

The ABC control rule should be designed so that fishing mortality is reduced ~~consider~~ reducing fishing mortality as stock size declines below B_{msy} and as scientific uncertainty increases, and may establish a stock abundance level below which directed fishing would not be allowed. When ~~re~~ scientific uncertainty cannot be directly calculated, such as when proxies are used, then a proxy for the uncertainty itself should be established based on the best scientific information, including comparison to other stocks. The control rule may be used in a tiered approach to address different levels of scientific uncertainty. Councils can develop ABC control rules that allow for changes in catch limits to be phased in over time or to account for the carry-over of some of the unused portion of the ACL from one year to the next; in which case, the Council must provide a comprehensive analysis and articulate within their FMP when the control rule can and cannot be used and how the control rule prevents overfishing.

(A) Phase-in ABC control rules. Large changes in catch limits due to new scientific information about the status of the stock can have negative short-term effects on a fishing industry. To help stabilize catch levels as stock assessments are updated, a Council may choose to develop a control rule that phases in changes to ABC over a period of time, not to exceed 3 years, as long as overfishing is prevented.

(B) Carry-over ABC control rules. An ABC control rule may include provisions for carry-over of some of the unused portion of the ACL from one year to increase the ABC for the next year, based on the increased stock abundance resulting from the fishery harvesting less than the full ACL. The resulting ABC recommended by the SSC must prevent overfishing and consider scientific uncertainty consistent with the Council's risk policy. In cases where an ACL has been reduced from the ABC, carry-over provisions may not require the ABC to be re-specified if the ACL can be adjusted upwards so that it is equal to or below the existing ABC.

(3) *Specification of ABC.* ABC may not exceed OFL (see paragraph (e)(2)(i)(D) of this section). Councils and their SSC should develop a process ~~for receiving~~ by which the SSC can access the best scientific information and advice used to establish ABC. ~~This process should: Identify the body that will apply~~ available regarding implementation of the ABC control rule ~~(i.e., calculates the ABC), and identify the review process that will evaluate the resulting ABC.~~ The SSC must recommend the ABC to the Council. An SSC may recommend an ABC that differs from the result of the ABC control rule calculation, based on factors such as data uncertainty, recruitment variability, declining trends in population variables, and other factors, but must ~~explain why;~~ provide an explanation for the deviation. For Secretarial FMPs or ~~FMP~~ amendments,

agency scientists or a peer review process would provide the scientific advice to establish ABC. For internationally-assessed stocks, an ABC as defined in these guidelines is not required if ~~they meet stocks fall under~~ the international exception (see paragraph (h)(21)(ii) of this section). The value of the ABC should typically be lower than the OFL, as it accounts for scientific uncertainty and the Council's risk policy. While the ABC is allowed to equal OFL, NMFS expects that in most cases ABC will be reduced from OFL to reduce the probability that overfishing might occur in a year. ~~Also, see paragraph (f)(5) of this section for cases where a Council recommends that ACL is equal to ABC, and ABC is equal to OFL.~~

(i) *Expression of ABC.* ABC should be expressed in terms of catch, but may be expressed in terms of landings as long as estimates of bycatch and any other fishing mortality not accounted for in the landings are incorporated into the determination of ABC.

(ii) *ABC for overfished stocks.* For overfished stocks and stock complexes, a rebuilding ABC must be set to reflect the annual catch that is consistent with the schedule of fishing mortality rates (i.e., $F_{rebuild}$) in the rebuilding plan.

~~(4) *ABC control rule.* For stocks and stock complexes required to have an ABC, each Council must establish an ABC control rule based on scientific advice from its SSC. The determination of ABC should be based, when possible, on the probability that an actual catch equal to the stock's ABC would result in overfishing. This probability that overfishing will occur cannot exceed 50 percent and should be a lower value. The ABC control rule should consider reducing fishing mortality as stock size declines and may establish a stock abundance level below which fishing would not be allowed. The process of establishing an ABC control rule could also involve science advisors or the peer review process established under Magnuson-Stevens Act section 302(g)(1)(E). The ABC control rule must articulate how ABC will be set compared to the OFL based on the scientific knowledge about the stock or stock complex and the scientific uncertainty in the estimate of OFL and any other scientific uncertainty. The ABC control rule should consider uncertainty in factors such as stock assessment results, time lags in updating assessments, the degree of retrospective revision of assessment results, and projections. The control rule may be used in a tiered approach to address different levels of scientific uncertainty.~~

~~(45) *Setting the annual catch limit—*~~

(i) *General.* ACL cannot exceed the ABC and may be set annually or on a multiyear plan basis. ACLs in coordination with AMs must prevent overfishing (see MSA section 303(a)(15)). ~~If an annual catch target (ACT) is not used, management uncertainty should be accounted for in the ACL.~~ If a Council recommends an ACL which equals ABC, and the ABC is equal to OFL, the Secretary may presume that the proposal would not prevent overfishing, in the absence of sufficient analysis and justification for the approach. A "multiyear plan" as referenced in section 303(a)(15) of the Magnuson-Stevens Act is a plan that establishes harvest specifications or harvest guidelines for each year of a time period greater than 1 year. A multiyear plan must include a mechanism for specifying ACLs for each year with appropriate AMs to prevent overfishing and maintain an appropriate rate of rebuilding if the stock or stock complex is in a rebuilding plan. A multiyear plan must provide that, if an ACL is exceeded for a year, then AMs are ~~triggered~~ implemented for the next year consistent with paragraph (g)(3) of this section.

(ii) *Sector-ACLs.* A Council may, but is not required to, divide an ACL into sector-ACLs. ~~If sector-ACLs are used, sector-AMs should also be specified.~~ "Sector," for purposes of this section, means a distinct user group to which separate management strategies and separate catch quotas apply. Examples of sectors include the commercial sector, recreational sector, or various gear groups within a fishery. ~~Sector-ACLs may also be~~

used for set-asides for research or bycatch. If the management measures for different sectors differ in the degree of management uncertainty, then sector-ACLs may be necessary so that appropriate AMs can be developed for each sector. If a Council chooses to use sector-ACLs, the sum of sector-ACLs must not exceed the stock or stock complex level ACL. The system of ACLs and AMs designed must be effective in protecting the stock or stock complex as a whole. Even if sector-ACLs and AMs are established, additional AMs at the stock or stock complex level may be necessary.

(iii) *ACLs for State-Federal Fisheries.* For stocks or stock complexes that have harvest in state or territorial waters, FMPs and FMP amendments should include an ACL for the overall stock that may be further divided. For example, the overall ACL could be divided into a Federal-ACL and state-ACL. However, NMFS recognizes that Federal management is limited to the portion of the fishery under Federal authority (~~see paragraph (g)(5) of this section~~). See 16 U.S.C. 1856. When stocks are co-managed by Federal, state, tribal, and/or territorial fishery managers, the goal should be to develop collaborative conservation and management strategies, and scientific capacity to support such strategies (including AMs for state or territorial and Federal waters), to prevent overfishing of shared stocks and ensure their sustainability.

(iv) *Phase-in ACLs.* Incrementing changes to catch limits in response to new scientific information can smooth management response to increases or decreases in stock status. To help stabilize catch levels as stock assessments are updated, a Council may choose to phase-in changes to ACLs over a period of time, not to exceed 3 years, as long as overfishing is prevented, based on advice from their SSC. The Council must provide a comprehensive analysis and articulate within their FMP when phase-in can and cannot be used and how overfishing will be prevented. Phase-in cannot be used for stocks that are overfished or subject to overfishing.

(v) *Carry-over ACLs.* Councils may choose to carry-over some of the unused portion of the ACL from one year to increase the ACL for the next year, so long as the ACL increase does not exceed the ABC and the stock is not overfished or subject to overfishing. Councils must evaluate whether unused ACL was due to low effort, due to lack of availability of fish due to lower than expected populations, or some other situation, based on advice from their SSC. The resulting ACL must consider scientific and management uncertainty and must prevent overfishing. The Council must provide a comprehensive analysis and articulate, within the FMP, when carry-over can and cannot be used and how overfishing will be prevented.

(vi) *Relationship between OY and the ACL framework.* The dual goals of NS1 are to prevent overfishing and achieve on a continuing basis OY. As described in section 3(33) of the Magnuson-Stevens Act and paragraph (e)(3) of this section, OY is determined by reducing MSY to account for ecological, economic, and social factors. While OY is a long-term average amount of desired yield, there is, for each year, an amount of fish that is consistent with achieving the long-term OY. To determine this amount of fish annually, OY factors should be accounted for explicitly in the ACL framework. The accounting for OY factors should take place at the ACL or ACT level. OY factors generally are not accounted for at the OFL or ABC levels, as the OFL is an annual representation of MSY, and the ABC is an upper limit on annual catch that is designed to prevent overfishing. Instead, the ACL or ACT should be set below ABC to the extent needed to account for OY considerations (e.g., needs of forage fish, promoting stability, addressing market conditions, etc.), as well as to account for management uncertainty as described in paragraphs (f)(1)(v) and (f)(4)(i) of this section. In reducing ACL or ACT from the ABC

level to account for OY factors and management uncertainty, Councils should use an ACL or ACT control rule that explicitly sets forth the relevant ecological, economic, or social factors being accounted for, in addition to management uncertainty in the fishery, and explains how these factors are addressed on an annual basis. The control rule may be qualitative but it must be based on the best scientific information available, including Stock Assessment and Fishery Evaluation (SAFE) reports, Ecosystem Status reports, Fishery Ecosystem Plans (FEPs), Management Strategy Evaluations (MSEs) or other information used in the catch specification process.

~~(6) ACT control rule. If ACT is specified as part of the AMs for a fishery, an ACT control rule is utilized for setting the ACT. The ACT control rule should clearly articulate how management uncertainty in the amount of catch in the fishery is accounted for in setting ACT. The objective for establishing the ACT and related AMs is that the ACL not be exceeded.~~

~~(i) Determining management uncertainty. Two sources of management uncertainty should be accounted for in establishing the AMs for a fishery, including the ACT control rule if utilized: uncertainty in the ability of managers to constrain catch so the ACL is not exceeded, and uncertainty in quantifying the true catch amounts (i.e., estimation errors). To determine the level of management uncertainty in controlling catch, analyses need to consider past management performance in the fishery and factors such as time lags in reported catch. Such analyses must be based on the best available scientific information from an SSC, agency scientists, or peer review process as appropriate.~~

~~(ii) Establishing tiers and corresponding ACT control rules. Tiers can be established based on levels of management uncertainty associated with the fishery, frequency and accuracy of catch monitoring data available, and risks of exceeding the limit. An ACT control rule could be established for each tier and have, as appropriate, different formulas and standards used to establish the ACT.~~

~~(7) A Council may choose to use a single control rule that combines both scientific and management uncertainty and supports the ABC recommendation and establishment of ACL and if used ACT.~~

~~(g) Accountability measures (AMs). The following features (see paragraphs (g)(1) through (5) of this section) of accountability measures apply to those stocks and stock complexes in the fishery.~~

(1) *Introduction.* AMs are management controls to prevent ACLs, including sector-ACLs, from being exceeded, and to correct or mitigate overages of the ACL or sector-ACL if they occur. AMs should address and minimize both the frequency and magnitude of overages and correct the problems that caused the overage in as short a time as possible. NMFS identifies two categories of AMs, inseason AMs and AMs for when the ACL is exceeded. ~~The FMP should identify what sources of data will be used to implement AMs (e.g., inseason data, annual catch compared to the ACL or sector-ACL, or multi-year averaging approach).~~ Councils may consider their risk policies when designing AMs.

(2) *Inseason AMs.* Whenever possible, FMPs should include inseason monitoring and management measures to prevent catch from exceeding ACLs or sector-ACL. Inseason AMs could include, but are not limited to: ~~ACT; an annual catch target (see paragraph (g)(4) of this section);~~ closure of a fishery; closure of specific areas; changes in gear; changes in trip size or bag limits; reductions in effort; or other appropriate management controls for the fishery. If final data or data components of catch are delayed, Councils should make appropriate use of preliminary data, such as landed catch, in implementing inseason AMs. FMPs should contain inseason closure authority giving NMFS the ability to close fisheries if it determines, based on data that it deems sufficiently reliable, that an ACL has been exceeded or is projected to be reached, and that closure of the fishery is necessary to prevent overfishing. For fisheries

without inseason management control to prevent the ACL from being exceeded, AMs should utilize ACTs that are set below ACLs so that catches do not exceed the ACL or sector-ACL.

(3) *AMs for when the ACL is exceeded.* On an annual basis, the Council must determine as soon as possible after the fishing year if an ACL or sector-ACL was exceeded. If an ACL or sector-ACL was exceeded, AMs must be ~~triggered and~~ implemented as soon as possible to correct the operational issue that caused the ACL or sector-ACL overage, as well as any biological consequences to the stock or stock complex resulting from the overage when it is known. These AMs ~~could~~ should include an overage adjustment, as well as a range of ~~among~~ other things potential measures, including modifications of inseason AMs, or the use or modification of ACTs, or overage adjustments. The type of AM chosen by a Council will likely vary depending on the sector of the fishery, status of the stock, the degree of the overage, recruitment patterns of the stock, or other pertinent information. If an ACL is set equal to zero and the AM for the fishery is a closure that prohibits fishing for a stock, additional AMs may still be necessary to prevent other sources of mortality from exceeding the ACL, including, but not limited to, AMs to address bycatch in accordance with National Standard 9. ~~are not required if only small amounts of catch or bycatch occur, and the catch or bycatch is unlikely to result in overfishing.~~ For stocks and stock complexes in rebuilding plans, the AMs should include overage adjustments that reduce the ACLs or sector-ACLs in the next fishing year by the full amount of the overages, unless the overage is shown by the best scientific information available to be the result of greater recruitment and abundance than expected and shows that a reduced overage adjustment, or no adjustment, is needed to mitigate the effects of the overages. ~~If catch exceeds the ACL for a given stock or stock complex more than once in the last four years, the system of ACLs and AMs should be re-evaluated, and modified if necessary, to improve its performance and effectiveness. A Council could choose a higher performance standard (e.g., a stock's catch should not exceed its ACL more often than once every five or six years) for a stock that is particularly vulnerable to the effects of overfishing, if the vulnerability of the stock has not already been accounted for in the ABC control rule.~~

(4) *Annual Catch Target (ACT) and ACT control rule.* ACTs are recommended in the system of AMs ~~accountability measures~~ so that ACL is not exceeded. An ACT is an amount of annual catch of a stock or stock complex that is the management target of a fishery, and accounts for management uncertainty in controlling the actual catch at or below the ACL. ACT control rules can be used to articulate how management uncertainty is accounted for in setting the ACT. ACT control rules can be developed by the Council, in coordination with the SSC, to help the Council account for management uncertainty. If ACTs are not used, ACLs must account for management uncertainty.

(54) *AMs based on multi-year average data.* Some fisheries have highly variable annual catches and lack reliable inseason or annual data on which to base AMs. If there are insufficient data upon which to compare catch to ACL or sector-ACL, ~~either inseason or on an annual basis,~~ AMs could be based on comparisons of average catch to average ACL or sector-ACL over a three-year moving average period or, if supported by analysis, some other appropriate multi-year period. Councils should explain why basing AMs on a multi-year period is appropriate. Evaluation of the moving average catch to the average ACL or sector-ACL must be conducted annually, and AMs ~~should be implemented~~ if the average catch exceeds the average ACL or sector-ACL, appropriate AMs should be implemented consistent with paragraph (g)(3) of this section. ~~As a performance standard, if the average catch exceeds the average ACL for a stock or stock complex more than once in the last four years, then the system of ACLs and AMs should be re-evaluated and modified if necessary to improve its performance and effectiveness. The initial ACL and management measures may incorporate information from previous years so that AMs based on~~

average ACLs can be applied from the first year. Alternatively, a Council could use a stepped approach where in year 1, catch is compared to the ACL for year 1; in year 2 the average catch for the past 2 years is compared to the average ACL; then in year 3 and beyond, the most recent 3 years of catch are compared to the corresponding ACLs for those years.

(65) *AMs for State-Federal Fisheries.* For stocks or stock complexes that have harvest in state or territorial waters, FMPs and FMP amendments must, at a minimum, have AMs for the portion of the fishery under Federal authority. Such AMs could include closing the EEZ when the Federal portion of the ACL is reached, or the overall stock's ACL is reached, or other measures.

(7) *Performance Standard.* If catch exceeds the ACL or sector-ACL for a given stock or stock complex more than once in the last four years, the system of ACLs and AMs should be re-evaluated, and modified if necessary, to improve its performance and effectiveness. If AMs are based on multi-year average data, the performance standard is based on a comparison of the average catch to the average ACL or sector-ACL. A Council could choose a higher performance standard (e.g., a stock's catch should not exceed its ACL or sector-ACL more often than once every five or six years) for a stock that is particularly vulnerable to the effects of overfishing, if the vulnerability of the stock has not already been accounted for in the ABC control rule.

(h) *Establishing ACL mechanisms and AMs in FMPs.* FMPs or FMP amendments must establish ACL mechanisms and AMs for all stocks and stock complexes ~~in the fishery,~~ that require conservation and management (see § 600.305(c)), unless paragraph (h)(21) of this section is applicable. These mechanisms should describe the annual or multiyear process by which specific ACLs, AMs, and other reference points such as OFL, and ABC will be established. ~~If a complex has multiple indicator stocks, each indicator stock must have its own ACL; an additional ACL for the stock complex as a whole is optional. In cases where fisheries (e.g., Pacific salmon) harvest multiple indicator stocks of a single species that cannot be distinguished at the time of capture, separate ACLs for the indicator stocks are not required and the ACL can be established for the complex as a whole.~~

~~(1) In establishing ACL mechanisms and AMs, FMPs should describe:~~

~~(i) Timeframes for setting ACLs (e.g., annually or multi-year periods);~~

~~(ii) Sector-ACLs, if any (including set-asides for research or bycatch);~~

~~(iii) AMs and how AMs are triggered and what sources of data will be used (e.g., inseason data, annual catch compared to the ACL, or multi-year averaging approach); and~~

~~(iv) Sector AMs, if there are sector ACLs.~~

(12) *Exceptions from ACL and AM requirements—*

(i) *Life cycle.* Section 303(a)(15) of the Magnuson-Stevens Act “shall not apply to a fishery for species that has a life cycle of approximately 1 year unless the Secretary has determined the fishery is subject to overfishing of that species” (as described in Magnuson-Stevens Act section 303 note). This exception applies to a stock for which the average lengthage of ~~time it takes for an individual to produce a reproductively active offspringspawners in the unfished population~~ is approximately 1 year ~~and that the individual has only one breeding season in its lifetime or less.~~ While exempt from the ACL and AM requirements, FMPs or FMP amendments for these stocks must have SDC, MSY, OY, ABC, and an ABC control rule.

~~(ii) *International fishery agreements.* Section 303(a)(15) of the Magnuson-Stevens Act applies “unless otherwise provided for under an international agreement in which the United States participates” (Magnuson-Stevens Act section 303 note). This exception applies to stocks or stock complexes subject to management under an international agreement, which is defined as “any bilateral or multilateral treaty, convention, or agreement which relates to fishing and to which the United States is a party” (see~~

~~Magnuson-Stevens Act section 3(24)). These stocks would still need to have SDC, MSY, and MSYQY.~~

~~(23) Flexibility in application of NS1 guidelines.~~ There are limited circumstances that may not fit the standard approaches to specification of reference points and management measures set forth in these guidelines. These include, among other things, conservation and management of Endangered Species Act listed species, ~~harvests from aquaculture operations, and~~ stocks with unusual life history characteristics (e.g., Pacific salmon, where the spawning potential ~~for a stock is spread over a multi-concentrated in one year period~~), ~~and stocks for which data are not available either to set reference points based on MSY or MSY proxies, or manage to reference points based on MSY or MSY proxies.~~ In these circumstances, Councils may propose alternative approaches for satisfying ~~the NS1~~ requirements of the Magnuson-Stevens Act ~~other~~ than those set forth in these guidelines. Councils must document their rationale for any alternative approaches for ~~these limited circumstances~~ in an FMP or FMP amendment, which will be reviewed for consistency with the Magnuson-Stevens Act.

(i) *Fisheries data.* In their FMPs, or associated public documents such as SAFE reports as appropriate, Councils must describe general data collection methods, as well as any specific data collection methods used for all stocks ~~in the fishery~~, and ~~EC species stock complexes in their FMPs~~, including:

- (1) Sources of fishing mortality (both landed and discarded), including commercial and recreational catch and bycatch in other fisheries;
- (2) Description of the data collection and estimation methods used to quantify total catch mortality in each fishery, including information on the management tools used (i.e., logbooks, vessel monitoring systems, observer programs, landings reports, fish tickets, processor reports, dealer reports, recreational angler surveys, or other methods); the frequency with which data are collected and updated; and the scope of sampling coverage for each fishery; and
- (3) Description of the methods used to compile catch data from various catch data collection methods and how those data are used to determine the relationship between total catch at a given point in time and the ACL for stocks and stock complexes that ~~are part of a fishery~~ require conservation and management.

(j) *Council actions to address overfishing and rebuilding for stocks and stock complexes in the fishery—*

(1) *Notification.* The Secretary will immediately notify in writing a Regional Fishery Management Council whenever it is determined that:

- (i) Overfishing is occurring;
- (ii) A stock or stock complex is overfished;
- (iii) A stock or stock complex is approaching an overfished condition; or
- (iv) Existing remedial action taken for the purpose of ending previously identified overfishing or rebuilding a previously identified overfished stock or stock complex has not resulted in adequate progress.

(2) *Timing of actions—*

~~(i) If a stock or stock complex is undergoing overfishing. Upon notification that a stock or stock complex is undergoing overfishing, a Council should immediately begin working with its SSC (or agency scientists or peer review processes in the case of Secretariially-managed fisheries) to ensure that the ABC is set appropriately to end overfishing. Councils should evaluate the cause of overfishing, address the issue that caused overfishing, and reevaluate their ACLs and AMs to make sure they are adequate. FMPs or FMP amendments must establish ACL and AM mechanisms in 2010, for stocks and stock complexes determined to be subject to overfishing, and in 2011, for all other stocks and stock complexes (see paragraph (b)(2)(iii) of this section). To address~~

~~practical implementation aspects of the FMP and FMP amendment process, paragraphs (j)(2)(i)(A) through (C) of this section clarifies the expected timing of actions.~~

~~(A) In addition to establishing ACL and AM mechanisms, the ACLs and AMs themselves must be specified in FMPs, FMP amendments, implementing regulations, or annual specifications beginning in 2010 or 2011, as appropriate.~~

~~(B) For stocks and stock complexes still determined to be subject to overfishing at the end of 2008, ACL and AM mechanisms and the ACLs and AMs themselves must be effective in fishing year 2010.~~

~~(C) For stocks and stock complexes determined to be subject to overfishing during 2009, ACL and AM mechanisms and ACLs and AMs themselves should be effective in fishing year 2010, if possible, or in fishing year 2011, at the latest.~~

(ii) ~~If a stock or stock complex is overfished or approaching an overfished condition. (A) For notifications made before July 12, 2009, a Council must prepare an FMP, FMP amendment, or proposed regulations within one year of notification. If the stock or stock complex is overfished, the purpose of the action is to specify a time period for ending overfishing and rebuilding the stock or stock complex that will be as short as possible as described under section 304(e)(4) of the Magnuson-Stevens Act. If the stock or stock complex is approaching an overfished condition, the purpose of the action is to prevent the biomass from declining below the MSST.~~ (B) ~~For notifications that a stock or stock complex is overfished or approaching an overfished condition made after July 12, 2009, a Council must prepare and implement an FMP, FMP amendment, or proposed regulations within two years of notification, consistent with the requirements of section 304(e)(3) of the Magnuson-Stevens Act. Council actions should be submitted to NMFS within 15 months of notification to ensure sufficient time for the Secretary to implement the measures, if approved. If the stock or stock complex is overfished and overfishing is occurring, the rebuilding plan must end overfishing immediately and be consistent with ACL and AM requirements of the Magnuson-Stevens Act.~~ ~~If the stock or stock complex is overfished and overfishing is occurring, the rebuilding plan must end overfishing immediately and be consistent with ACL and AM requirements of the Magnuson-Stevens Act.~~

(3) *Overfished fishery.*—

(i) Where a stock or stock complex is overfished, a Council must specify a time period for rebuilding the stock or stock complex based on factors specified in Magnuson-Stevens Act section 304(e)(4). This target time for rebuilding (T_{target}) shall be as short as possible, taking into account: ~~the~~ the status and biology of any overfished stock, the needs of fishing communities, recommendations by international organizations in which the U.S. participates, and interaction of the stock within the marine ecosystem. In addition, the time period shall not exceed 10 years, except where biology of the stock, other environmental conditions, or management measures under an international agreement to which the U.S. participates, dictate otherwise. SSCs (or agency scientists or peer review processes in the case of Secretarial actions) shall provide recommendations for achieving rebuilding targets (see Magnuson-Stevens Act section 302(g)(1)(B)). The above factors enter into the specification of T_{target} as follows:

(A) *The “minimum time for rebuilding a stock” (T_{min}).* T_{min} means the amount of time the stock or stock complex is expected to take to rebuild to its MSY biomass level in the absence of any fishing mortality. In this context, the term “expected” means to have at least a 50 percent probability of attaining the

~~B_{msy}, where such probabilities can be calculated. The starting year for the T_{min} calculation should be the first year that the rebuilding plan is expected to be implemented. The starting year for the T_{min} calculation is 2 years after notification that a stock or stock complex is overfished or the first year that a rebuilding plan is expected to be implemented, whichever is sooner.~~

~~(B) For scenarios under paragraph (j)(2)(ii)(A) of this section, the starting year for the T_{min} calculation is the first year that a rebuilding plan is implemented. For scenarios under paragraph (j)(2)(ii)(B) of this section, the starting year for the T_{min} calculation is 2 years after notification that a stock or stock complex is overfished or the first year that a rebuilding plan is implemented, whichever is sooner.~~

~~(B) The maximum time for rebuilding a stock or stock complex to its B_{msy} (T_{max}).~~

~~(1C) If T_{min} for the stock or stock complex is 10 years or less, then the maximum time allowable for rebuilding (T_{max}) that stock to its B_{msy} is 10 years.~~

~~(2D) If T_{min} for the stock or stock complex exceeds 10 years, then the maximum time allowable for rebuilding a stock or stock complex one of the following methods can be used to its B_{msy} is determine T_{max}:~~

~~(i) T_{min} plus the length of time associated with one generation time for that stock or stock complex. "Generation time" is the average length of time between when an individual is born and the birth of its offspring,~~

~~(ii) The amount of time the stock or stock complex is expected to take to rebuild to B_{msy} if fished at 75 percent of MFMT, or~~

~~(iii) T_{min} multiplied by two.~~

~~(3) When selecting a method for determining T_{max}, Councils, in consultation with their SSC, should choose a method that reduces uncertainty, is based on the best scientific information available, and meets the requirement to rebuild in as short a time as possible. Councils must provide a quantitative rationale for their choice. a Council must provide a rationale for its decision based on the best scientific information available~~

~~(E) T_{target} shall not exceed T_{max} and should be calculated based on the factors described in paragraph (j)(3).~~

~~(C) Target time to rebuilding a stock or stock complex (T_{target}). T_{target} is the specified time period for rebuilding a stock that is considered to be in as short a time as possible, while taking into account the factors described in paragraph (j)(3)(i) of this section. T_{target} shall not exceed T_{max}, and the fishing mortality associated with achieving T_{target} is referred to as F_{rebuild}. T_{target} should be a shorter period of time than T_{max}. If a Council recommends a T_{target} that equals T_{max}, absent an analysis and explanation of why rebuilding any sooner than T_{max} is not possible, the Secretary may presume that the proposed T_{target} will not rebuild the stock in as short a time as possible.~~

~~(ii) If a stock or stock complex reached the end of its rebuilding plan period and has not yet been determined to be rebuilt, then the rebuilding F should not be increased until the stock or stock complex has been demonstrated to be rebuilt. If the rebuilding plan was based on a T_{target} that was less than T_{max} and the stock or stock complex is not rebuilt by T_{target}, rebuilding measures should be revised, if necessary, such that the stock~~

~~or stock complex will be rebuilt by T_{max} . If the stock or stock complex has not rebuilt by T_{max} , then the fishing mortality rate should be maintained at $F_{rebuild}$ or 75 percent of the MFMT, whichever is less.~~

(iii) Council action addressing an overfished fishery must allocate both overfishing restrictions and recovery benefits fairly and equitably among sectors of the fishery.
(iii) For fisheries managed under an international agreement, Council action addressing an overfished fishery must reflect traditional participation in the fishery, relative to other nations, by fishermen of the United States.

(iv) *Adequate Progress.* The Secretary ~~shall~~ **must** review rebuilding plans at routine intervals that may not exceed two years to determine whether the plans have resulted in adequate progress toward ending overfishing and rebuilding affected fish stocks (MSA section 304(e)(7)). Such reviews ~~could~~ **should** include the review of recent stock assessments, comparisons of catches to the ACL, or other appropriate performance measures. The Secretary ~~may~~ **must** find that adequate progress is not being made if 1) the biomass of the stock is not increasing; 2) $F_{rebuild}$ or the ACL associated with $F_{rebuild}$ are exceeded, and AMs are not correcting the operational issue that caused the overage and addressing any biological consequences to the stock or stock complex resulting from the overage when it is known (see paragraph (g)(3) of this section). ~~A lack of adequate progress may also be found or~~ 3) when the rebuilding expectations of a stock or stock complex are significantly changed due to new ~~and unexpected~~ information about the status of the stock. If a determination is made under this provision, the Secretary will notify the appropriate Council and recommend further conservation and management measures, and the Council must develop and implement a new or revised rebuilding plan within two years (see MSA sections 304(e)(3) and (e)(7)(B)). For Secretariaily-managed fisheries, the Secretary would take immediate action necessary to achieve adequate progress toward ending overfishing and rebuilding. For any stock or stock complex where the Secretary determines a lack of adequate progress due to the biomass of the stock not increasing, the new or revised rebuilding plan should contain new management measures which reduce fishing mortality and take into account other factors, as described in paragraph (e)(2)(iii)(C) of this section. For any stock or stock complex where the Secretary determines a lack of adequate progress due to $F_{rebuild}$ or the associated ACL being exceeded without AMs correcting the operational issue and addressing biological consequences, the new or revised rebuilding plan must contain new management measures that will keep fishing mortality below $F_{rebuild}$, and demonstrate how AMs will prevent and correct any overages should they occur (see paragraph (g)(3) of this section). For any stock or stock complex where the Secretary determines a lack of adequate progress due to significantly changed rebuilding expectations from new information, the new or revised rebuilding plan should not increase the fishing mortality rate and should reduce it further as needed.

(v) While a stock or stock complex is rebuilding, revising rebuilding timeframes (i.e., T_{target} and T_{max}) ~~or $F_{rebuild}$~~ is not necessary, unless the Secretary finds that adequate progress is not being made. However, councils are encouraged to review rebuilding progress to determine if adjustments to $F_{rebuild}$ are necessary to meet rebuilding timeframes (i.e., T_{target} and T_{max}).

(vi) ~~If a~~ **the** stock or stock complex has not rebuilt by T_{max} ~~T_{target}~~ , then the fishing mortality rate should be maintained at its current $F_{rebuild}$ or 75 percent of the MFMT, whichever is less, until the stock or stock complex is rebuilt, ~~or the Secretary finds that adequate progress is~~ not being made, or the rebuilding plan reaches T_{max} . If the stock has not

rebuilt by T_{max} , then the rebuilding F should be maintained at its current $F_{rebuild}$ or 50 percent of the MFMT, whichever is less, until the stock is rebuilt or until the Secretary finds adequate progress is not being made.

(4) *Emergency actions and interim measures.* ~~The Secretary, on his/her own initiative or in response to a Council request, may implement interim measures to reduce overfishing or promulgate regulations to address an emergency (Magnuson-Stevens Act section 304(e)(6) or 305(c)). In considering a Council request for action, the Secretary would consider, among other things, the need for and urgency of the action and public interest considerations, such as benefits to the stock or stock complex and impacts on participants in the fishery.~~ If the Secretary finds that an emergency or overfishing exists or that interim measures are needed to reduce overfishing for any fishery, he/she may promulgate emergency regulations to address the emergency or interim measures to reduce overfishing, without regard to whether a fishery management plan exists for such fishery. The Secretary may promulgate such regulations or interim measures on his/her own initiative or at the request of the Council (see MSA section 304(e)(6)). In considering a Council request for action, the Secretary would consider, among other things, the need for and urgency of the action and public interest considerations, such as benefits to the stock or stock complex and impacts on participants in the fishery.

(i) These measures may remain in effect for not more than 180 days, but may be extended for an additional 186 days if the public has had an opportunity to comment on the measures and, in the case of Council-recommended measures, the Council is actively preparing an FMP, FMP amendment, or proposed regulations to address the emergency or overfishing on a permanent basis.

(ii) Often, these measures need to be implemented without prior notice and an opportunity for public comment, as it would be impracticable to provide for such processes given the need to act quickly and also contrary to the public interest to delay action. However, emergency regulations and interim measures that do not qualify for waivers or exceptions under the Administrative Procedure Act would need to follow proposed notice and comment rulemaking procedures.

(iii) The Secretary may find that an emergency exists involving a fishery in a situation that

- (A) Results from a significantly changed understanding of the status of the stock or stock complex, or unanticipated events that threaten the health of the stock;
- (B) Presents significant conservation and management problems in the fishery; and
- (C) Can be addressed through emergency regulations for which the benefits outweigh the value of advance notice, public comment, and deliberative consideration of impacts on participants to the same extent as would be expected under the normal rulemaking process.

(iv) There is no need to demonstrate that an emergency exists in order to promulgate or request that the Secretary promulgate interim actions to reduce overfishing.

~~If a Council is developing a rebuilding plan or revising an existing rebuilding plan due to a lack of adequate progress (see MSA section 304(e)(7)), the Secretary may, in response to a Council request, implement interim measures that reduce, but do not necessarily end, overfishing (see MSA section 304(e)(6)) if all of the following criteria are met:~~

~~(i) The interim measures are needed to address an unanticipated and significantly changed understanding of the status of the stock or stock complex;~~

~~(ii) Ending overfishing immediately is expected to result in severe social and/or economic impacts to a fishery; and~~

~~(iii) The interim measures will ensure that the stock or stock complex will increase its current biomass through the duration of the interim measures.~~

~~(i) These measures may remain in effect for not more than 180 days, but may be extended for an additional 186 days if the public has had an opportunity to comment on the measures and, in the case of Council recommended measures, the Council is actively preparing an FMP, FMP amendment, or proposed regulations to address the emergency or overfishing on a permanent basis.~~

~~(ii) Often, these measures need to be implemented without prior notice and an opportunity for public comment, as it would be impracticable to provide for such processes given the need to act quickly and also contrary to the public interest to delay action. However, emergency regulations and interim measures that do not qualify for waivers or exceptions under the Administrative Procedure Act would need to follow proposed notice and comment rulemaking procedures.~~

~~(5) *Discontinuing a rebuilding plan based on new scientific information.* A Council may discontinue a rebuilding plan for a stock or stock complex before it reaches B_{msy} , if all of the following criteria are met:~~

~~(i) The Secretary determines that the stock was not overfished in the year that the overfished determination (see MSA section 304(e)(3)) was based on or any subsequent years; and~~

~~(ii) The biomass of the stock is not currently below the MSST.~~

~~(6) *Management measures for depleted stocks.* In cases where an overfished stock or stock complex is considered to be “depleted” (see paragraph (c)(2)(i)(F)), a Council may identify in its rebuilding plan additional management measures or initiatives that could improve the status of the stock, such as: reevaluating SDCs to determine if they are representative of current environmental conditions, recommending the restoration of habitat and other ameliorative programs, identifying research priorities to improve the Councils understanding of the impediments to rebuilding, or partnering with Federal and state agencies to address non-fishing related impacts.~~

(k) *International overfishing.* If the Secretary determines that a fishery is overfished or approaching a condition of being overfished due to excessive international fishing pressure, and for which there are no management measures (or no effective measures) to end overfishing under an international agreement to which the United States is a party, then the Secretary and/or the appropriate Council shall take certain actions as provided under Magnuson-Stevens Act section 304(i). The Secretary, in cooperation with the Secretary of State, must immediately take appropriate action at the international level to end the overfishing. In addition, within one year after the determination, the Secretary and/or appropriate Council shall:

(1) Develop recommendations for domestic regulations to address the relative impact of the U.S. fishing vessels on the stock. Council recommendations should be submitted to the Secretary.

(2) Develop and submit recommendations to the Secretary of State, and to the Congress, for international actions that will end overfishing in the fishery and rebuild the affected stocks, taking into account the relative impact of vessels of other nations and vessels of the United States on the relevant stock. Councils should, in consultation with the Secretary, develop recommendations that take into consideration relevant provisions of the Magnuson-Stevens Act

and NS1 guidelines, including section 304(e) of the Magnuson-Stevens Act and paragraph (j)(3)(~~iviii~~) of this section, and other applicable laws. For highly migratory species in the Pacific, recommendations from the Western Pacific, North Pacific, or Pacific Councils must be developed and submitted consistent with Magnuson-Stevens Reauthorization Act section 503(f), as appropriate.

(3) *Considerations for assessing “relative impact.”* “Relative impact” under paragraphs (k)(1) and (2) of this section may include consideration of factors that include, but are not limited to: Domestic and international management measures already in place, management history of a given nation, estimates of a nation's landings or catch (including bycatch) in a given fishery, and estimates of a nation's mortality contributions in a given fishery. Information used to determine relative impact must be based upon the best available scientific information.

~~(l) Relationship of National Standard 1 to other national standards—General. National Standards 2 through 10 provide further requirements for conservation and management measures in FMPs, but do not alter the requirement of NS1 to prevent overfishing and rebuild overfished stocks (see MSA section 301(a)), and guidelines for these standards are provided in §§ 600.315 – 600.355. Below is a description of how some of the other National Standards intersect with National Standard 1.~~

~~(1) National Standard 2 (see § 600.315). Management measures and reference points to implement NS1 must be based on the best scientific information available. When data are insufficient to estimate reference points directly, Councils should develop reasonable proxies to the extent possible (also see paragraph (e)(1)(iv)(B) of this section). In cases where scientific data are severely limited, effort should also be directed to identifying and gathering the needed data. SSCs should advise their Councils regarding the best scientific information available for fishery management decisions.~~

~~(2) National Standard 3 (see § 600.320). Reference points should generally be specified in terms of the level of stock aggregation for which the best scientific information is available (also see paragraph (e)(1)(iii) of this section). Also, scientific assessments must be based on the best information about the total range of the stock and potential biological structuring of the stock into biological sub-units, which may differ from the geographic units on which management is feasible. paragraphs (e)(1)(ii) and (iii) of this section).~~

~~(3) National Standard 6 (see § 600.335). Councils must build into the reference points and control rules appropriate consideration of risk, taking into account uncertainties in estimating harvest, stock conditions, life history parameters, or the effects of environmental factors.~~

~~(4) National Standard 8 (see § 600.345). National Standard 8 directs the Councils to apply addresses economic and social factors towards sustained participation of fishing communities and minimizing to the extent practicable, minimize adverse economic impacts on such fishing communities within the context of preventing overfishing and rebuilding overfished stocks as required under National Standard 1. Therefore, calculation Calculation of OY as reduced from MSY should include also includes consideration of economic and social factors, but the combination of management measures chosen to achieve the OY must principally be designed to prevent overfishing and rebuild overfished stocks.~~

~~(5) National Standard 9 (see § 600.350). Evaluation of stock status with respect to reference points must take into account mortality caused by bycatch. In addition, the estimation of catch should include the mortality of fish that are discarded.~~

~~(m) Exceptions to requirements to prevent overfishing. Exceptions to the requirement to prevent overfishing could apply under certain limited circumstances. Harvesting one stock at its optimum level may result in overfishing of another stock when the two stocks tend to be caught together (This can occur when the two stocks are part of the same fishery or if one is bycatch in the other's fishery). Before a Council may decide to allow this type of overfishing, an analysis must be performed and the~~

analysis must contain a justification in terms of overall benefits, including a comparison of benefits under alternative management measures, and an analysis of the risk of any stock or stock complex falling below its MSST. The Council may decide to allow this type of overfishing if the fishery is not overfished and the analysis demonstrates that all of the following conditions are satisfied:

- (1) Such action will result in long-term net benefits to the Nation;
- (2) Mitigating measures have been considered and it has been demonstrated that a similar level of long-term net benefits cannot be achieved by modifying fleet behavior, gear selection/configuration, or other technical characteristic in a manner such that no overfishing would occur; and
- (3) The resulting rate of fishing mortality will not cause any stock or stock complex to fall below its MSST more than 50 percent of the time in the long term, although it is recognized that persistent overfishing is expected to cause the affected stock to fall below its Bmsy more than 50 percent of the time in the long term.

§ 600.320 National Standard 3—Management Units.

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

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

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

(d) *Management unit.* The term “management unit” means a fishery or that portion of a fishery identified in an FMP as relevant to the FMP's management objectives. **Stocks in the fishery management unit are considered to be in need of conservation and management (see § 600.305(c)).**

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

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

~~(ii) *Geographic*—could be an area.~~

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

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

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

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

(2) *Conservation and management measures.* FMPs should include conservation and management measures for that part of the management unit within U.S. waters, although the Secretary can ordinarily implement them only within the EEZ. The measures need not be identical for each geographic area within the management unit, if the FMP justifies the differences. A management unit may contain, ~~in addition to regulated species,~~ stocks of fish for which there is not enough information available to specify MSY and OY or ~~to establish management measures, so that data on these species may be collected under the FMP.their~~ proxies.

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

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

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

(3) Management activities and habitat programs of adjacent states and their effects on the FMP's objectives and management measures. Where state action is necessary to implement measures within state waters to achieve FMP objectives, the FMP should identify what state action is necessary, discuss the consequences, of state inaction or contrary action, and make

appropriate recommendations. The FMP should also discuss the impact that Federal regulations will have on state management activities.

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

- (i) By limiting the management unit's scope to that portion of the stock found in U.S. waters;
- (ii) By estimating MSY for the entire stock and then basing the determination of OY for the U.S. fishery on the portion of the stock within U.S. waters; or
- (iii) By referring to treaties or cooperative agreements.

§ 600.340 National Standard 7—Costs and Benefits.

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

~~(b) *Necessity of Federal management—*~~

~~(1) *General.* The principle that not every fishery needs regulation is implicit in this standard. The Magnuson-Stevens Act requires Councils to prepare FMPs only for overfished fisheries and for other fisheries where regulation would serve some useful purpose and where the present or future benefits of regulation would justify the costs. For example, the need to collect data about a fishery is not, by itself, adequate justification for preparation of an FMP, since there are less costly ways to gather the data (see § 600.320(d)(2). In some cases, the FMP preparation process itself, even if it does not culminate in a document approved by the Secretary, can be useful in supplying a basis for management by one or more coastal states.~~

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

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

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

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

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

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

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

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

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

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

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

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

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