

SALMON TECHNICAL TEAM COMMENTS ON ADVANCE NOTICE OF PROPOSED RULEMAKING (ANPR) FOR
NATIONAL STANDARD 1 GUIDELINES

National Standard 1 (NS1) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) states that conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimal yield (OY) from each fishery for the U.S. fishing industry. The MSA requires the Secretary of Commerce to establish advisory guidelines (which shall not have the force and effect of law) based on the national standards to assist in the development of fishery management plans. The National Marine Fisheries Service (NMFS) advanced notice of proposed rulemaking (ANPR) for NS1 guidelines requests comments and advice on eleven specific issues.

1. Stocks in a fishery. Current NS1 guidelines specify that ecosystem component (EC) stocks are not “in the fishery”, but do not state clearly whether or not designation of essential fish habitat (EFH) is required. This is non-trivial for salmon because ecosystem component species generally have different habitat requirements than stocks in the fishery.
2. Overfishing and multi-year impacts. Salmon stocks consist of multiple age classes, but fisheries impact primarily maturing fish. Assessment data come primarily from catch and spawning escapement, and thus inform the abundance of maturing fish, which is driven by the abundance one, or at most two, year classes. Abundance of individual year classes of a salmon stock can vary widely as a result of environmental fluctuations. This leads to high variability in yearly catches and spawning escapement that is not necessarily indicative of the overall long-term abundance of the stock. For this reason it makes more sense to have a multi-year criterion for determining the status of a stock with respect to abundance, but fishing mortality can be assessed on an annual basis. The STT does not see a need to expand the permissible time frame for specification of overfishing.
3. Annual catch limits and optimum yield. The STT has no comment on this issue.
4. Mixed-stock fisheries and optimal yield. Management of mixed-stock fisheries is challenging, specifically because stocks differ in vulnerability to the fishery and susceptibility to overfishing. However, optimal yield has been defined in the MSA as MSY reduced to account for relevant economic, social and ecological factors. This issue identified in the ANPR appears to confuse OY with MSY. The constraint on harvest of healthy productive stocks resulting from incidental impacts on depressed less productive stocks is a “relevant ecological factor” that causes OY to be reduced from MSY. Rebuilding requirements and ACL do not prevent achieving OY, they prevent achieving MSY by causing OY to be less than MSY.
5. Scientific uncertainty and management uncertainty. The STT agrees with the concern identified in this issue – that explicitly accounting for scientific and management uncertainty may result in ACL that are overly precautionary. Determining whether or not management measures are adequately precautionary should not be based on theoretical considerations, but on actual performance. For salmon fisheries, on stocks that are relatively short lived and the population dynamics are volatile, this is better measured by the frequency with which overfishing occurs and stocks become

overfished than by theoretical considerations. This may not be the case for other fisheries on stocks that are long lived and have greater demographic inertia.

6. Data poor stocks. In developing Amendment 16, we had to deal with the issue of data-poor stocks, and the problems of trying to establish ACL for them. While we would appreciate any additional advice on how to deal with the problem, we were unable to specify ACL or SDC for some stocks other than by proxy. Absent additional guidance, the NS1 guidelines must recognize the impracticality of specifying reference points that cannot be measured or assessed.
7. Acceptable biological catch control rules. Because Pacific salmon are semelparous, and fisheries impact primarily maturing fish, the issue of carry-over in developing ABC control rules is not relevant to this FMP. Most salmon not caught in one year typically spawn and die; they are not available for carry-over.
8. Catch accounting. The STT believes that, to the extent practically possible, all fishery related impacts should be counted against ABC and ACL .
9. Accountability measures. The STT has no comments on guidance for accountability measures.
10. ACL exceptions. While Pacific salmon have a life-cycle that is greater than one year, they share many similarities with stock to which the life cycle exception applies. Pacific salmon have only one reproductive season in their lifetime and the majority of fishery impacts occur on the fish that are maturing. For coho and pink salmon, virtually all fishery impacts occur on a single, maturing age class. For Chinook salmon, spawning escapement is typically dominated by one or two age classes, and the bulk of fishery impacts occur on those same age classes. Because of these similarities, they are subject to the volatile population dynamics and difficulties in predicting abundance that characterize species with a one-year lifespan.
11. Rebuilding progress and revising rebuilding plans. Pacific salmon present special problems in assessing rebuilding. The fisheries are dominated by one, or at most two, year classes, and recruitment can fluctuate widely as a result of environmental variability. In many or most cases, a rebuilding stock will not follow a predictable trajectory, but will rebound when a year class encounters favorable environmental conditions. The STT would welcome additional advice on how to deal with assessing rebuilding progress in these circumstances

Additional comments:

Metrics for specification of ACL. While the MSA requires the specification of annual catch limits, it does not explicitly state that they must be in the form of quotas, or in the metric of numbers or biomass of fish. Current NS1 guidelines describe alternative metrics for SDC including rates and catch levels to determine when overfishing is occurring. The NS1 guidelines also describe the derivation of ABC from an ABC control rule, which is defined as a specified method for determining ABC. Control rules for catch typically specify an allowable catch by applying an exploitation rate to abundance. In the case of salmon, exploitation rates are generally assessed using tagged hatchery indicator stocks. Because different stocks are indistinguishable in the catch, catch cannot be directly monitored for individual stocks. Instead, stock-specific catches are estimated from exploitation rates of indicator stocks, and spawning escapement of unmarked stocks. Thus, exploitation rates are actually a more direct measure of the impact of fishing than are catch estimates. The intent of the ACL requirement in the MSA is to

prevent overfishing. If the management system is demonstrably effective in accomplishing this, flexibility should be exercised in interpretation of the ACL requirement. The STT would like to see this flexibility acknowledged in the NS1 guidelines.

Procedures for developing a rebuilding plan. The NS1 guidelines currently require that a rebuilding plan be prepared and implemented through an FMP, FMP amendment, or proposed regulations (j)(2)(ii)(B). For salmon at least, a rebuilding plan could be implemented more quickly but for the timing requirements of an amendment or regulations. The “default” provisions of the FMP automatically lead to what is an appropriate “interim” rebuilding plan. Our recent experience with Sacramento River fall Chinook is a case in point. We suggest that the NS1 guidelines clarify or provide more flexibility for how recovery plans are developed and implemented.