



New England Fishery Management Council

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COUNCIL SOLICITING CONTRACT WORK Northeast Multispecies Control Rule Development February 18, 2020

Project Description

The New England Fishery Management Council (NEFMC) requires the services of an independent contractor to develop alternatives for Northeast Multispecies (Groundfish) Acceptable Biological Catch (ABC) control rules. This is a medium-term, temporary contractor role, commencing on or about March 1, 2020, and expected to be completed by November 2020. The contractor will work closely with representatives of the Council's Scientific and Statistical Committee (SSC), the Council's Groundfish Plan Development Team (PDT), and the Groundfish Committee. This contract will focus on groundfish stocks with analytic assessments. As of 2019, these stocks are: Gulf of Maine cod, Gulf of Maine haddock, Georges bank haddock, American plaice, pollock, Georges Bank winter flounder, white hake, Acadian redfish, Cape Cod/Gulf of Maine yellowtail flounder, Southern New England/Mid-Atlantic yellowtail flounder, and Southern New England/Mid-Atlantic winter flounder.

Project Background

The [Northeast Multispecies Fishery Management Plan](#) (FMP) manages thirteen groundfish species. Some species have separate geographic stocks. The FMP establishes the procedures for determining the catches that are allowed in the fishery.

The Magnuson-Stevens Act (MSA) requires that the SSC recommend an ABC for every stock. Annual Catch Limits (ACLs) established by the Council cannot exceed this ABC. These ACLs limit catches by fishermen, both recreational and commercial. ABCs are calculated based on an ABC Control Rule. The Council establishes Control Rules in consultation with its SSC. Control rules account for the scientific uncertainty in the overfishing limit (OFL) and the Council's risk policy. They are based on a comprehensive analysis that shows how the control rule prevents overfishing. The National Standard Guidelines ([50 CFR 600.310](#)) provide further discussion of this concept.

Amendment 16 to the FMP implemented the current ABC Control Rules in 2010. The specific control rule language and rationale can be found in [Amendment 16](#). In brief, there are four elements to these rules:

- a) ABC should be determined as the catch associated with 75% of F_{MSY} .
- b) If fishing at 75% of F_{MSY} does not achieve the mandated rebuilding requirements for overfished stocks, ABC should be determined as the catch associated with the fishing mortality that meets rebuilding requirements (Frebuild).

- c) For stocks that cannot rebuild to B_{MSY} in the specified rebuilding period, even with no fishing, the ABC should be based on incidental bycatch, including a reduction in bycatch rate (i.e., the proportion of the stock caught as bycatch).
- d) Interim ABCs should be determined for stocks with unknown status according to case-by-case recommendations from the SSC.

While these control rules have been used since 2010, there are number of reasons that changes may be necessary. First, the National Standard Guidelines have been modified since their adoption. As a result the application of some of these control rules is unclear. For example, when sub-paragraph (c) was adopted, the understanding was that if an ABC for a stock was set at 0, all fishing activity in the stock area that might catch this stock was prohibited. This part of the control rule was designed to identify a small ABC that would allow non-targeted fishing to continue. Current legal interpretations and policy guidance reduce the need to identify an incidental bycatch ABC. In addition, when the control rule was adopted, the understanding was that Frebuild had to be recalculated after every stock assessment. If rebuilding progress lagged for any reason, it was possible that a stock could not rebuild by the end of a rebuilding period even in the absence of fishing. Revisions to the National Standard Guidelines make it clear that Frebuild need not be recalculated after every assessment, making it unlikely that Frebuild will approach 0.

In addition to changes in policy, experience with the control rules suggests revisions may be needed. At times the PDT and SSC struggled to determine which paragraph applied to a specific situation. The SSC also supplemented the control rules though the application of ad hoc methods such as holding the ABC constant over a two- or three-year period. The rationale for this approach has not always been clear. The SSC's ad hoc approach could be viewed as a modification to the FMP's control rule.

Finally, the current control rules may not reflect best practices or lessons learned from experience in New England and other regions. For example, until a stock is overfished, the target fishing mortality does not decline. The National Standard Guidelines suggest "The ABC control rule should consider reducing fishing mortality as stock size declines below B_{msy} and as scientific uncertainty increases." In some cases the groundfish control rules did not prevent overfishing.

Expected Responsibilities and Deliverables

The Council establishes ABC Control Rules, in consultation with its SSC. For this reason, the contractor will analyze and evaluate a suite of suitable control rules, but will not recommend a specific control rule. A report will be prepared that evaluates the performance of the control rules against a range of metrics that will be identified by Council representatives. This contract is limited to stocks with analytic assessments because a research track assessment in 2020 is expected to address stocks with empirical assessments. The candidate control rules should consider, at a minimum, the legal requirements of the MSA, relevant policy guidance for implementation of the MSA, the Council's Risk Policy, and the performance of groundfish assessments and associated catch projections.

The contractor will be expected to identify possible ABC control rules and test their performance in a Management Strategy Evaluation (MSE) framework. This should be a "desktop" MSE working closely with Council representatives as described below. At a minimum, the "desktop" MSE should have an operational model that is consistent with known population characteristics of

the groundfish stocks, a standard assessment models, and a management models. A description of the models and methods should be provided by the contractor.

At present, standard ABC control rules are applied to the groundfish stocks with analytic assessments – the rules are not tailored for each stock – and this should be the approach tested by the contractor. The performance of the candidate control rules should be evaluated for the stocks listed in the Project Description section.

The contractor will provide a detailed report that includes the following items:

1. A brief overview of ABC control rules used in other fisheries of the U.S. This should include a discussion of the rationale for the adoption of these rules and should identify strengths and weaknesses of different approaches.
2. A description of the technical aspects of the MSE, including formulas used in the operating, stock assessment, and management models. Source code should also be provided at the conclusion of the project.
3. Potential ABC control rules that are designed to address the following situations:
 - a) Initial conditions that illustrate performance under various states of stock status (overfished, rebuilt, increasing or decreasing biomass, etc.)
 - b) High, medium, and low productivity states of nature.
 - c) Stocks assessed with multiple analytic models.
 - d) Stocks where catch projections have proven unreliable.
 - e) Stocks with an assessment bias, as determined by retrospective analyses or other methods
4. A comparison of the performance of the control rule alternatives across a range of metrics. Desired metrics will be identified in concert with the Council's SSC, Groundfish PDT, and Groundfish Committee. Simulations should test the performance of the rules under a broad range of stock status, productivity, and assessment errors. This analysis should include a comparison to the existing control rules. At a minimum, these will include:
 - a) Probability of overfishing
 - b) Probability of the stock being overfished
 - c) Average catch
 - d) Variability in yield
 - e) Stability in the ABC

Once delivered, this report will be the property of the Council, with usage retained exclusively by the Council.

The contractor will work closely with the Council's Groundfish PDT (through the PDT chair) and SSC. This will include periodic meetings to update progress. The contractor will also be expected to brief the Groundfish Committee during the period of the contract, and to deliver a final report to the Committee. Necessary office space and equipment will be provided by the contractor; approved travel expenses will be reimbursed by the Council.

The Council expects completion of this work by November 2020. In December 2020 the Council will consider pursuing a management action in 2021 to revise the ABC control rules. There may be an opportunity for an additional contract to support that work.

Desired Experience and Demonstrated Skills

1. Familiarity with the U.S. federal fisheries management system, including a basic understanding of the key relevant statute (e.g. Magnuson-Stevens Fishery Conservation and Management Act,) and regulatory guidance. Familiarity with federal fisheries management in New England is preferred but not required.
2. General understanding of fishery management programs at the state and national levels.
3. Familiarity with the use of scientific information in the fishery management process. In particular, the successful candidate will have extensive experience with analytic stock assessments and the use of simulation techniques to evaluate various ABC control rules. Familiarity with the stock assessment and projection models used for Northeast Multispecies stocks is preferred.
4. Ability to research and compile fisheries management policies and scientific research with minimal supervision.
5. Strong writing and speaking skills. Demonstrated ability to summarize complex policies and procedures in clear, easily read documents, or through concise verbal discussions.
6. Advance degree in a fisheries technical field, particularly in population dynamics, modelling, and stock assessment.
7. Demonstrated ability to summarize conflicting information in an objective manner.
8. Candidates employed by advocacy organizations or by organizations that are parties in fishery lawsuits related to this issue will not be considered.
9. The successful candidate will not have a conflict of interest, defined as any financial or non-financial interest which conflicts with the actions or judgments of an individual because it:
 - a. Could impair the individual's objectivity;
 - b. Could create an unfair competitive advantage for any person or organization;
 - c. Could create the appearance of either item listed above.

Application Submission Contact

Interested professionals are encouraged to submit a letter of interest, current resume or CV, examples of similar work completed for other organizations or publications, and budget with expected expenses. In addition, applicants should describe the approach that would be used to meet the requirements of this project, including deliverables. Travel expenses need not be included in the budget as approved travel will be reimbursed by the Council. Letters of interest and supporting materials should be received **no later than March 18, 2020**, and addressed to Thomas Nies, NEFMC, 50 Water Street, Mill 2, Newburyport, MA 01950, or by e-mail tnies@nefmc.org. Questions concerning this proposal should be directed to the same address.

This work will be funded under New England Fishery Management Council Award #FNA20NMF4410001. Compliance with the Magnuson-Stevens Fishery Conservation and Management Act (P.L. 109-479 as amended) and the Council's standard contract terms and conditions will be expected.

NEFMC takes affirmative action toward to ensuring equal opportunities; the Council encourages women-owned businesses, protected veterans, and individuals with disabilities to submit letters of interest and other requested materials for consideration under this announcement.

Disclaimer

1. All costs associated with the preparation and presentation of the proposal will be borne by consultants submitting letters of interest.
2. Materials submitted will not be returned.
3. Respondents must disclose any relevant conflicts of interest, and will be expected to comply with all federal grant contracting requirements.
4. The Council reserves the right to accept or reject any or all letters of interest received; negotiate with all qualified potential candidates; cancel or modify the RFP in part or in its entirety; and/or change the application guidelines, when it is in its best interests.

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