



NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

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Action Memo

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Dan Hull, Chairman
David Witherell, Executive Director

SUBJECT:

Halibut Abundance-based PSC Limits - Discussion paper

STAFF CONTACT: Diana Stram

ACTION REQUIRED:

Review discussion paper; action as necessary

BACKGROUND:

In 2015, in conjunction with actions to reduce current BSAI halibut PSC limits in groundfish fisheries (Amendment 111), the Council requested that Council and IPHC staff evaluate possible approaches to link BSAI halibut PSC limits to data or model-based abundance estimates of halibut.

Since December 2015, beginning with a paper authored by IPHC staff, multiple discussion papers have been presented with information therein compiled by analysts from within the different agencies (IPHC, NMFS AFSC, NMFS RO and NPFMC staff). The purpose of these papers have been to provide requested information on appropriate indices for use in indexing halibut abundance to PSC in the Bering Sea groundfish fisheries. This discussion paper both summarizes and augments information presented iteratively in those focused papers spanning from 2015 to 2017. The intent of this paper is to provide a comprehensive overview of all relevant information pertinent to the development of abundance based management (ABM) alternatives for indexing PSC to halibut abundance and to provide a framework to enable the Council to construct draft alternatives. In this manner, the analysts have assembled all relevant and requested information in a comprehensive manner to allow for the Council process of the development of alternatives for this action to begin.

A summary of the discussion paper structure and contents by section is provided below.

1. Background: The Pacific halibut (*Hippoglossus stenolepis*) resource is utilized in Alaska for subsistence and personal use as well as recreational (sport) and commercial fisheries. Halibut have significant social, cultural, and economic importance to fishery participants and fishing communities throughout their range. Halibut are also incidentally taken as bycatch (Prohibited Species Catch; PSC) in groundfish fisheries. Section 1 provides additional background on the assessment and management of halibut, PSC limits imposed on groundfish fisheries, and the relative responsibilities of the Council, NMFS and the IPHC.

2. Purpose and Need: The Council is considering linking BSAI PSC limits to data on halibut abundance, so that PSC limits would vary in response to halibut abundance. The Council wishes to limit total halibut mortality to the extent practical, while providing an opportunity for the directed halibut fishery, and conserving spawning stock biomass, particularly at low levels of abundance. The Council recognizes that abundance-based halibut PSC limits may increase and decrease with changes in halibut abundance. Section 2 provides for additional

information on the purpose and need for this action and for developing alternatives that are consistent with the purpose and need.

3. Indices of Halibut Abundance: Multiple indices were considered and are described in Section 3, along with information on the size composition of the catch in relation to directed halibut and directed groundfish fisheries. Correlation analyses are provided to help describe relationships between indices and fisheries. An examination of all the indices compared qualities relative to their precision, spatial coverage, availability, and the segment (size/age) of the halibut population the index addresses. These characteristics were judged against a set of principles considered desirable. The section concludes with rationales for recommending the EBS bottom trawl survey data and the IPHC Area 4abcde setline survey (SLS) data (separately or in combination) for use as an abundance based management index for setting Pacific halibut PSC limits.

4. Control rules to establish halibut PSC limits: Section 4 describes the features of control rules (slope, stability, floor, ceiling, starting point) as well as examples of various control rules used in the BSAI for other PSC management systems. Examples of alternative mechanisms for setting PSC limits (decision tables, multi-dimensional and non-linear control rules) are also provided.

5. Developing Alternatives: Based on the recommended subset of indices and combinations from Section 3, as well as guidance from the Council in June, some strawmen alternatives with options/variations are provided in Section 5 for further consideration. A range of elements and options are proposed for the Council to begin drafting alternatives for analysis, based on the information contained in this paper and previous Council direction.

6. Incentives: An overview of the ways in which existing programs attempt to minimize bycatch at all times, and how an ABM program might adapt those approaches to the specific context of BSAI groundfish fisheries is presented in Section 6. It also provides a basis for understanding the principles that determine whether an incentive structure can be both effective and appropriate for the sectors involved. Subsections address the current use of incentives in BSAI and GOA fisheries, some general design considerations for incentive programs, the application of a halibut performance standard in BSAI groundfish fisheries, and a discussion of how the proposed elements of an abundance-based limit affect fleet incentives to minimize bycatch.

7. Decision points for the development of alternatives: Section 7 identifies the steps and decision points for the Council to begin drafting a suite of alternatives for analysis. The section also includes potential discussion points for the Council with respect to continued coordination and collaboration with the IPHC, and the appropriate scope for a NEPA analysis to support this action.

Staff analysts from the different agencies will be available to present the information contained in the discussion paper.