CHAPTER 15

# Assessment of the Shortraker Rockfish Stock in the Eastern Bering Sea and Aleutian Islands

by

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## Introduction

In 2005, Bering Sea/Aleutian Islands (BSAI) rockfish were moved to a biennial assessment schedule to coincide with the frequency of trawl surveys in the Aleutian Islands (AI) and the eastern Bering Sea (EBS) slope. These surveys occur in even years, and for these years a full assessment of shortraker rockfish in the BSAI area will be conducted. The 2010 full assessment can be found at http://www.afsc.noaa.gov/REFM/docs/2010/BSAIshortraker.pdf. The shortraker assessment is conducted with Tier 5 methods, in which a non-age-structured model is applied to a time series of survey biomass estimates to obtain the current estimated biomass. An exploitation rate is then applied to estimated current biomass to obtain the ABC and OFL.

## Updated ABC, OFL, and Catch

The BSAI catch of shortraker rockfish in 2010 was 323 t, with 143 t in the AI and 180 t in the EBS. The 2011 catch of shortraker rockfish, through October 8, was 269 t, with 224 t in the AI and 45 t in the EBS.

Because neither the time series of survey biomass estimates nor the proxy values for $F_{abc}$ and $F_{ofl}$ have changed since 2010, the estimated ABC and OFL values for 2012 and 2013 in this update are identical to the values for 2011 and 2012 produced in the 2010 assessment. Stock size, harvest, and fishing rate reference values are shown in the following table:

| | As estimated or *specified last* year for: | | As estimated or *recommended this* year for: | |
|---|---|---|---|---|
| **Quantity** | 2011 | 2012 | 2012 | 2013 |
| *M* (natural mortality rate) | 0.03 | 0.03 | 0.03 | 0.03 |
| Tier | 5 | 5 | 5 | 5 |
| Biomass (t) | 17,452 | 17,452 | 17,452 | 17,452 |
| $F_{OFL}$ | 0.03 | 0.03 | 0.03 | 0.03 |
| $maxF_{ABC}$ | 0.0225 | 0.0225 | 0.0225 | 0.0225 |
| $F_{ABC}$ | 0.0225 | 0.0225 | 0.0225 | 0.0225 |
| OFL (t) | 524 | 524 | 524 | 524 |
| maxABC (t) | 393 | 393 | 393 | 393 |
| ABC (t) | 393 | 393 | 393 | 393 |
| | As determined *last* year | | As determined *this* year | |
| **Status** | 2009 | 2010 | 2010 | 2011 |
| Overfishing | No | n/a | No | n/a |

BSAI shortraker rockfish was not subjected to overfishing in 2010.

**Responses to the comments of the Scientific and Statistical Committee**

General SSC comments from the December, 2010, meeting

*For assessments with multiple models, the SSC requests that status determination criteria (Tier, two-year biomass projections, ABC's, and OFL's) be arrayed by stock assessment authors in a table in the assessment chapter so that the Plan Team and SSC can consider choosing alternative models. If the number of models being presented is very large, the authors may use their discretion to select a subset of desirable models for this summary.*

*For greater consistency in the way the terminal year catch is specified, the SSC requests that authors incorporate their best estimate of total landings that will occur for the entire year. This information will be used to generate projections and should be incorporated into BSAI and GOA specification tables.*

These issues will be addressed when an age-structured model is developed for shortraker rockfish.

There were no specific SSC comments for the BSAI shortraker rockfish.

**Data Gaps and Research Priorities**

Little information is known regarding most aspects of the biology of shortraker rockfish, particularly in the Aleutian Islands. In particular, little is known regarding the distribution, duration, and habitat requirements of the various life-history stages of shortraker rockfish. Validating aging techniques of shortraker rockfish, and obtaining ages from archived samples remains a research priority.

**Summary table for the Plan Team**

| Year | Biomass | OFL | ABC | TAC | Catch |
|---|---|---|---|---|---|
| 2010 | 17,187 | 516 | 387 | 387 | 323 |
| 2011 | 17,452 | 524 | 393 | 393 | 269[2] |
| 2012 | 17,452 | 524 | 393 | | |
| 2013 | 17,452 | 524 | 393 | | |

[2] Catch as of October 8, 2011.