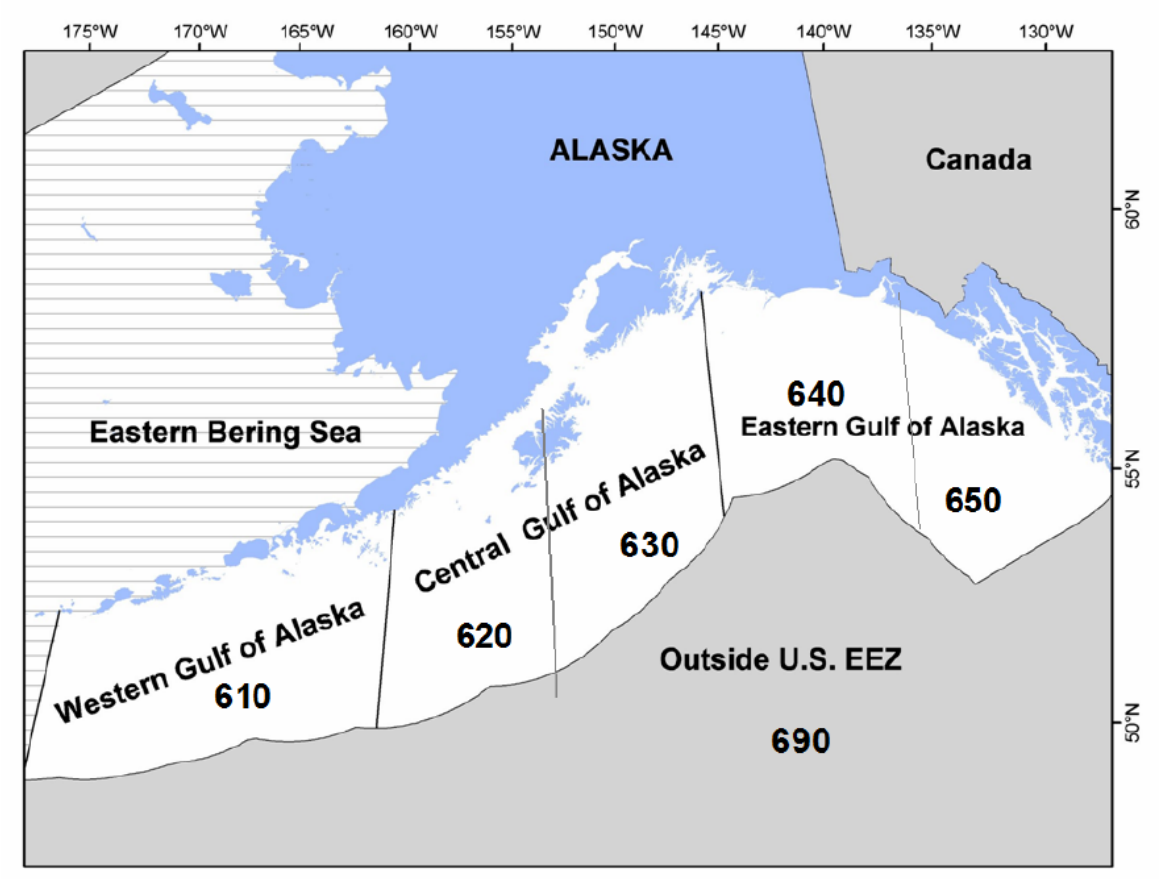
SSC Draft Report April 2018 C5, C6, C8, D1



C-5 Salmon Genetics and Bycatch Mortality

- The authors presented an impressive body of work, that addressed SSC requests submitted during its April 2017 meeting.
- The new information included proportional stock/stock complex composition, with spatial and temporal breakouts, the age composition of genotyped Chinook salmon, and estimates of PSC by stock and area.
- The authors also presented a special project on evaluating the presence of hatchery fish via thermally marked otoliths recovered from PSC taken in the GOA rockfish program fishery.
- The SSC appreciates the industry support and cooperation in collecting samples from the rockfish fishery. Samples were analyzed by the ADF&G mark-tag-age lab. The SSC interprets these data with caution due the very small sample sizes, but encourages more work on hatchery contributions to PSC.

C-5 Salmon Genetics and Bycatch Mortality

- Annual genetic reports provide important information for regulatory analysis and other scientific investigations that elucidate the potential impact of PSC at a regional level.
- Ongoing work in improving baseline aggregations may increase resolution in the future and reports. Development of the single nucleotide polymorphism (SNP) coast-wide baseline and database for stock specific identification of Chinook salmon will advance our ability to estimate stock-specific impacts.
- **The SSC recommends that the informal salmon workgroup consider a workshop with industry participation to facilitate discussion on how to better focus the genetic reports and to discuss information gaps. The SSC also requests that Robert Clark and Dayv Lowry be placed on the workgroup as SSC representatives.**
- The SSC notes that the thermally marked otolith project was conducted without designated funding**. The SSC considers this an important research component needed to better understand PSC stock composition in the GOA.** The SSC recommends that funding for future work on this project be considered within the context of the Council's research priorities.

C-5 Salmon Mortality - AEQ

- The SSC also received an update on the AEQ model.
- The SSC concurs with the author's suggestions for future improvements to the model.
- In addition, the authors should consider whether the assumed 10% coefficient of variation used to reflect run-size uncertainty is reasonable.
- The SSC also requests that future changes made (e.g., model structure, new/revised data) between the past and current AEQ analyses be summarized at the beginning of the report.
- The SSC also discussed the feasibility of extending the AEQ methods for an application in the GOA. The amount of available data and complexity associated with regional salmon abundances in the GOA would make this a difficult task, although not insurmountable.

C-6 GOA Trawl CV Chinook PSC Limit Adjustments Initial Review

- The SSC reviewed an earlier draft of this proposed amendment package and recommended that the analysis be released for public review pending some modifications. The revised document comprehensively addressed requested modifications.
- **The SSC recommends that the analysis be released for public review, following incorporation of the following information/modifications:**
  - Add one or more examples that illustrate how in-season intersector transfers would interact with interseason/interyear rollovers.
  - Clarify the trade-offs between the potential risks to groundfish fisheries against potential risks to Chinook salmon fisheries.
  - The language in the document to the effect that the original Chinook salmon PSC hard cap was set conservatively low should be better contextualized based on the current number of Chinook salmon stocks of concern.

C-6 GOA Trawl CV Chinook PSC Limit Adjustments Initial Review

- Information that has been developed on communities engaged in the different GOA Chinook salmon fisheries for other recent Council analyses should be incorporated by reference in Section 4.6.
- If determined applicable, revise Chapter 5 Magnuson-Stevens Act and Fishery Management Plan Considerations to include an EO 12898 Environmental Justice analysis.

C-8 Halibut Retention in BSAI Sablefish Pots Initial Review

- The SSC commends the analysts for an extremely thorough exploration of the potential effects of allowing retention of halibut in sablefish pot gear in the BSAI.
- **The SSC recommends that this analysis be released for public review, subject to the following minor modifications.**
  - Split table ES-1 (Page 10) into separate columns for the impacts if the utilization of sablefish pots does not change in response to the opportunity to retain halibut, and the impacts if changes occur.

C-8 Halibut Retention in BSAI Sablefish Pots Initial Review

- Add a table comparing the species and incidence of seabird bycatch associated with longline and pot gears.
- Improve the ability to address the differential distribution of potential beneficial and adverse impacts of the proposed action across communities engaged in the relevant fisheries.

C-8 Halibut Retention in BSAI Sablefish Pots Initial Review

- The current analysis does not evaluate an option where there is significant expansion of sablefish pot gear utilization in response to the increased opportunity to catch halibut. If this is allowed, an expansion of the scope of the analysis will be required to assess which longline vessels would likely convert to pots, how their behavior would change, and whether larger increases in utilization of pot gear would result in consequential impacts
- In identifying preferred alternatives, the SSC encourages the Council to consider the following factors:
  - The tunnel provision listed under element 3 (9” maximum tunnel opening) may significantly influence the extent to which there is an increase in halibut targeting with pots, and thus the extent of the impacts.
  - Enforcement has identified a number of practical issues.
  - The policy for pot utilization in the Pribilof Island Habitat Conservation Zone (PIHCZ) will be critical to determining the impact of increased pot utilization on Pribilof Island Blue King Crab stocks.

D-1 Halibut Abundance-Based PSC Limits

- The SSC believes that the working paper has several useful features that will aid the Council in the development of ABM alternatives.
  - Reconciles the different “types” of control rules.
  - Provides logical structure for developing ABM alternatives.
- Some elements of the working paper fall short in meeting the Council’s October 2017 request.
  - The preliminary investigation is not adequate for evaluating the relative performance of the strawmen ABM control rules compared to several of the Council’s objectives.
  - Not possible to assess the tradeoffs among the different ABM strawmen presented in the document and to determine which control rules would be best for moving forward as a suite of alternatives for an initial review draft analysis.
  - A formal analysis is needed that is capable of assessing the impact of PSC control rules on the groundfish fisheries, directed halibut fisheries, and the halibut stock.

D-1 Halibut Abundance-Based PSC Limits

- **The SSC recommends that the Council move forward in drafting an initial suite of ABM alternatives for a formal evaluation.**
- The SSC highly recommends that the Council's initial suite of alternatives be treated as the first of potentially several sets of alternatives that will need to be evaluated before arriving at a final set of alternatives for an Environmental Impact Statement (EIS).
- **The SSC recommends that the Council follow an iterative process for determining the final set of alternatives for evaluation in an EIS.**

D-1 Halibut Abundance-Based PSC Limits

- **The SSC also has the following recommendations:**
- **If the Council decides to view an analysis of an initial suite of alternatives in October 2018, the SSC would like a presentation on an evaluation outline from the working group in June 2018.**
- Careful consideration to what length of time-series appropriately reflects the mean and variability of each index.
- Indices should be standardized to reflect current, as opposed to historical, fishery behavior, regulatory environment, biology, and population dynamics.
- Consider using the IPHC setline survey for all sizes of halibut (effectively O26) in place of the O32 index.
- ABM strawmen 1 and 2 should not be used as a basis for developing initial alternatives. ABM4 provides a better framework for a multidimensional control rule that considers both the trawl and setline survey indices.

D-1 Halibut Abundance-Based PSC Limits

- One or a small number of alternative (but fixed) PSC levels should be included in the analysis, both for comparison, and to allow investigation of the performance of ABM alternatives relative to differences only in the scale of the starting points.
- Metrics such as the O26 portion of PSC and the fraction of the PSC removed from area 4CDE may be worth investigating as a performance metric and/or potential tool to create incentives in tandem with ABM control rules.
- A 3- or 5-year running average of PSC limits could be considered as an option for promoting stability in PSC limits.

D1- Objectives

- 1. Halibut PSC limits should be indexed to halibut abundance
- 2. Halibut spawning stock biomass should be protected especially at lower levels of abundance
- 3. There should be flexibility provided to avoid unnecessarily constraining the groundfish fishery
- particularly when halibut abundance is high
- 4. Provide for directed halibut fishing operations in the Bering Sea.
- 5. Provide for some stability in PSC limits on an inter-annual basis.