Draft SSC Report
June 2026

SSC Report (in full)

SSC Administrative Discussion

- The SSC received a report on administrative items from Council staff
- Ms. Henry highlighted that the SSC will be recommending groundfish specifications in both the October and December meetings
- The SSC expresses deep gratitude for Maria Davis' many years of work and wishes her the best in her retirement

SSC Administrative Discussion

- The SSC also discussed membership needs and ***requests*** the Council consider filling at least one position in 2027, and possibly two
- Should the Council choose to do so, the SSC ***recommends*** prioritizing the following:
    - An expert in stock assessment, statistical design and modern statistical modeling methods
    - And either: a expert social scientist with a background in anthropology, sociology, human geography, or a related field, or an expert with experience in climate, ecosystem and integrated thinking.

C2 BSAI Crab Harvest Specifications

General Crab Comments

- The SSC ***thanks*** outgoing CPT co-chair Dr. Litzow for his work
- The SSC ***supports*** filling the CPT co-chair position as quickly as possible, acknowledging that if a co-chair can't be found in a timely manner, it will significantly impact CPT capacity
- The SSC ***supports*** the CPT and the Scallop Plan Team working together to provide technical review, noting various logistical approaches for this are possible
- The SSC ***notes*** that the WAIRKC assessment has been postponed until 2027 due to capacity constraints

C2 BSAI Crab Harvest Specifications

Aleutian Islands Golden King Crab

- Full assessment. The SSC ***recommends*** Model 26.0a, consistent with author and CPT recommendation.
- Tier 3b; not overfished; overfishing determination in October
- The SSC ***agrees*** with the CPT recommended OFL and 25% ABC buffer, unchanged from the previous assessment
  - reliance on fishery CPUE (no fishery-independent index),
  - retrospective patterns,
  - spatial coverage limitations,
  - WAG model convergence issue

C2 BSAI Crab Harvest Specifications

Aleutian Islands Golden King Crab

- The SSC ***supports*** CPT research recommendations.
- The SSC ***recommends:***
    - Developing an area-specific risk accounting framework for EAG and WAG (i.e., buffering for area-specific uncertainties).
    - Investigating the source of WAG convergence failures and explore alternative parameterizations.
    - Continuing development of the draft risk table framework.

C2 BSAI Crab Harvest Specifications

Aleutian Islands Golden King Crab

- The SSC ***recommends***
  - Continue development of a combined EAG/WAG model framework, including evaluation of whether natural mortality (M) is similar between subdistricts.
  - Explore CPUE reliability diagnostics and alternative covariates as alternatives to selectivity time blocks for addressing retrospective bias.
  - Investigate the EAG retrospective pattern using objective, data-driven methods and alternative CPUE diagnostics.
  - Evaluate the necessity of depth in the ST-GLMM and associated sensitivity analyses.

C2 BSAI Crab Harvest Specifications

Pribilof Islands Golden King Crab

- Triennial assessment last conducted in 2023
- MMB for this stock is based on 2002 - 2016 EBS slope trawl survey.
- Tier 4/5 (Tier 5 groundfish) stock. Overfishing did not occur. Overfished status cannot be determined.
- The SSC ***recommends*** Tier 5 calculation of OFL, in agreement with CPT and author recommendations
- 30% ABC buffer - increased from 25% used in last assessment
  - 10 years since the last survey data collection
  - 1/3 of the MMB data used are interpolated values
  - To provide consistency with consideration of other stocks

C2 BSAI Crab Harvest Specifications

Pribilof Islands Golden King Crab

- The SSC looks forward to EBS bottom trawl survey modernization efforts to include stations on the upper continental slope which may overlap golden king crab habitat in the ADF&G Pribilof District Management Area

C2 BSAI Crab Harvest Specifications

Snow Crab Model Runs

- Annual assessment
- Previously a Tier 3 length-structured model, used a Tier 4 model in 2025 because of model instability.
- Multiple models attempted to address stability and convergence with limited success

C2 BSAI Crab Harvest Specifications

Snow Crab Model Runs

- The SSC ***recommends*** the authors bring forward only the Tier 4 model in October
    - Give new author time to explore model structure for May 2027
    - Focus on developing a simpler, stable model before sequentially building complexity
    - Add a convergence diagnostics section
    - Develop a yield-per-recruit analysis
    - Include a rebuilding update section in future documents

C2 BSAI Crab Harvest Specifications

Tanner Crab Model Runs

- EBS Tanner crab is assessed annually under Tier 3, last full assessment was September 2025
- The SSC ***recommends*** the authors bring forward the following models for consideration of harvest specifications in October
    - updated current model (TCSAM02) using the new maturity workflow, updated survey and fishery data
    - a matching GMACS model
    - Tier 4 fallback calculation

C2 BSAI Crab Harvest Specifications

Tanner Crab Model Runs

- The SSC ***requests***
  - TCSAM02 - GMACS bridge table comparing convergence, likelihood components, priors and penalties, derived biomass and abundance estimates, reference points, and OFL calculations;
  - a technical reconciliation of the TCSAM02 and GMACS Tier 3 OFL calculations
  - summary of relevant recommendations and author responses from the June 2026 CIE review, if available.
- The SSC ***supports*** the CPT recommendation that application of maturity ogives in the Tanner crab and snow crab assessments be included in a future January modeling workshop.

C2 BSAI Crab Harvest Specifications

Bristol Bay Red King Crab Model Runs

- Bristol Bay red king crab is assessed annually under Tier 3 and the last full assessment was September 2025
- The SSC concurs with the CPT and author recommendations to bring forward 3 models in the fall:
  - 24.0c.2 (base model updated with GMACS),
  - 26.0 (extended size bins),
  - the Tier 4 REMA model

C2 BSAI Crab Harvest Specifications

Bristol Bay Red King Crab Model Runs

- The SSC ***recommends***:
  - Reconsideration of the molting probability matrix in the new size bins.
  - Continued development of model-based indices to consider the abundance of Northern District EBS crab.
  - Consideration of differences observed between survey and fishery CPUE metrics.
  - Further work on selectivity and catchability.
  - Continued development of a common framework for using BSFRF data for snow crab, Tanner crab, and BBRKC.

C2 BSAI Crab Harvest Specifications

Norton Sound Red King Crab Crab Model Runs

- Tier 4 stock; assessed annually with the previous assessment in 2025; utilizes a size-structured male-only GMACS model.
- In agreement with the CPT, the SSC ***recommends*** the authors bring forward the following models
    - Model 26.0: 2025 accepted model (25.0a2) bridged to GMACS 2.20.34a
    - Model 26.1: Model 26.0 with the model-based abundance added and the model-based index catchability fixed to 1
    - Model 26.2: Model 26.1 with the model-based index catchability estimated

C2 BSAI Crab Harvest Specifications

Norton Sound Red King Crab Crab Model Runs

- The SSC ***requests***
  - Report the sensitivity of the index and reference points to the choice of prediction area.
  - Determine whether the depth covariate captures bathymetric structure or partially accounts for differences between the NBS and ADF&G surveys.
  - Reconcile conflicting model-selection metrics and provide additional justification for including depth as a covariate.
- The SSC ***supports*** the CPT recommendation to evaluate the model-based index with and without survey-station depth as a covariate.

C2 BSAI Crab Harvest Specifications

St. Matthew Blue King Crab Model Runs

- Tier 4 stock; assessed biennially with the previous assessment in 2024; utilizes a length-based, male-only GMACS model
- The SSC ***recommends*** the authors bring forward the following models for consideration of harvest specifications in October
    - 26.1 - new base model with updated GMACS and data
    - 26.2 - 26.1 with a model-based index for EBS trawl survey and fixed catchability = 1
    - In agreement with the CPT and authors
- The SSC ***recommends*** additional information on the model-based index be brought forward in the final document to inform final model selection
- The SSC also ***supports*** the CPT's research priorities for this stock

C2 BSAI Crab Harvest Specifications

Crab Plan Team Report - Various

- SAFE Guidelines
  - The SSC ***appreciates*** the work to streamline the information provided by assessment authors in setting crab specifications
- General ESP Updates
  - The SSC ***supports*** the development of dynamic structural equation modeling (DSEM) applications for integrating relevant ESP indicators into a causal analytical framework

C2 BSAI Crab Harvest Specifications

Crab Plan Team Report - Research Update (Snow Crab Size at Maturity)

- The SSC ***appreciates*** the research updates on changes in snow crab size at maturity
- The SSC ***highlights*** that high exploitation rates for large males in directed fisheries may create a feedback loop that results in a declining male size at maturity.
- The SSC ***recommends*** the CPT consider the parallels with the management approach taken in eastern Canada

C2 BSAI Crab Harvest Specifications

Crab Plan Team Report - Risk Tables

- The CPT recommended a tiered approach that includes:
  - Persistent sources of uncertainty that change infrequently
  - Temporary concerns that are specific to the assessment year and would inform any additional increase from a base or historical ABC buffer
- The SSC ***supports*** the proposed guidelines for the implementation of risk tables for BSAI crab stocks
- The SSC ***notes*** that refinements may be needed and considers the application of risk tables to be an iterative process
- The SSC ***recommends*** that all crab assessments produce a draft risk table on the typical assessment cycle for each stock.

C2 BSAI Crab Harvest Specifications

Crab Plan Team Report - Hybrids

- The CPT recommended:
  - Hybrid catch data should not be included in snow crab or Tanner crab assessments
  - Tracking hybrid abundance associated with the EBS bottom trawl survey
  - Uncertainties associated with hybrids should be dealt with using the existing flexibility in the FMP via the buffer setting process
- The SSC ***agrees*** with these recommendations

C2 BSAI Crab Harvest Specifications

Crab Plan Team Report - Hybrids

- The SSC ***recommended*** additional work include:
  - Continued research into hybrid-specific and hybrid-parent population dynamics, genetics, life history information and habitat preferences will inform potential long-term approaches
  - The SSC ***encourages*** continued communication to align how hybrids are defined across agencies and data streams
- However, the SSC ***notes*** that if hybrid abundance continues to be elevated, the existing approach may need to be reconsidered

C3 Scallop Harvest Specifications

- The SSC reviewed a full assessment for Alaska scallops. The last assessment was in 2024.
- The SSC ***recommends*** FMP-specified OFL based on historical total catch and the ABC, consistent with author and SPT recommendation
    - ABC = maxABC = 90% OFL
    - Overfished status not available, overfishing did not occur
- The SSC agrees with the SPT and ***recommends*** moving the assessment to a triennial cycle

C3 Scallop Harvest Specifications

- The SSC ***recommends*** using the current assessment method and ***supports*** continued development of a model-based approach as resources allow
- The SSC ***supports*** joint/nested CPT/SPT technical review process
- The SSC suggests that the SPT might consider exploring the potential to draw assistance from the experience and expertise of the NEFMC's SPT

C5 GOA Tanner Crab Protection Measures – Initial Review

- The SSC commends the work analysts put in to make the document organized and approachable and discussed ways to continue to improve the clarity of the document for the future.
- The SSC ***finds*** this initial review analysis is not sufficient to inform Council for final action at this time
- The SSC ***notes*** that this portion of the Tanner crab stock may be persistently linked to static bathymetric features, which may make fixed closures an appropriate conservation tool, even in a highly dynamic environment

C5 GOA Tanner Crab Protection Measures – Initial Review

- The SSC provides a number of ***recommendations*** to improve the analysis:
  - Clarification of the objectives of the Alternative 2 closures, with respect to Tanner crab:
    - Unclear if preserving structure and function of habitat or reducing observed or unobserved mortality is part of the objective
    - The SSC discussed whether the action was anticipated to improve GOA Tanner stocks overall or specifically in the localized action area

C5 GOA Tanner Crab Protection Measures – Initial Review

- The SSC also ***recommends*** the following analytical improvements:
  - Developing quantitative effort displacement scenarios in order to bracket likely net effects on Tanner crab PSC and groundfish
    - Draw on local and traditional knowledge to inform likely displacement behaviour
  - A retrospective analysis to quantify how Tanner crab PSC might have changed had the closure been in effect during recent years (similar to recent Council analyses of the impacts of BBRKC closures)
    - A “worst case” scenario which effort is displaced to immediately adjacent areas with similar (area 525630) or higher (area 535632) reported PSC rate
    - A “most plausible” scenario based on the historical distribution of fishing effort

C5 GOA Tanner Crab Protection Measures – Initial Review

- The SSC ***recommends*** the following analytical considerations:
  - Disaggregating the vessels (CPs and CVs) and processors from, or landing at, Kodiak to better understand distributional benefits of area fisheries and possible costs of the closure.
  - Consistent treatment of the spatial scale of Tanner stock effects (currently limited to proposed closure) and social and economic effects (currently areawide)
  - Better representation of the area trawled
  - Identifying performance metrics, a monitoring and evaluation schedule, and data streams to evaluate the effectiveness of the spatial closure
  - Discuss the effectiveness of recent trawl gear modifications

C5 GOA Tanner Crab Protection Measures – Initial Review

- The SSC ***recommends***:
  - Compare Tanner crab abundance and annual or seasonal Tanner PSC within the proposed closures to the overall Tanner abundance or biomass and relative to total commercial removals of Tanner
  - Explore the relationship between PSC and Tanner abundance-at-size to characterize the interaction between NPT gear and stock components
  - Discuss the reliability of the observer data in representing the distribution of overall fishing effort: i.e., observer data availability in the area versus fleet-wide
  - Include potential impacts on non-crab PSC species (Chinook, halibut)
  - Consider the role of natural stock variability of Tanner crab in the effectiveness of a time-area closure

C5 GOA Tanner Crab Protection Measures – Initial Review

- The SSC ***recommends*** developing performance metrics, a monitoring framework, and identifying the data streams necessary to evaluate the effectiveness of the spatial closure.
  - Beyond what the SSC could accomplish at this meeting.
  - The SSC highlights that a process for iterative conversation among SSC members, Council members, and analysts may be necessary to accomplish this goal
- The SSC could not recommend specific performance metrics for Alternative 3 without knowing the objectives the Council wishes to evaluate, but was able to provide some examples
- The SSC ***recommends*** that potentially impacted human and ecological components of the analysis be identified, and characterize changes due to linkages across components

D2 GOA Trawl Survey

- 2025 GOA survey redesign implemented to improve spatial alignment and maintain index quality under variable effort
    - 2025 guild-level shifts (flatfish & gadids ↑, rockfish ↓) occurred alongside a 17% station reduction
- Depth and habitat sampling in 2025 broadly consistent with historic patterns
- Guild-level biomass correlations showed no meaningful change with inclusion of 2025
- Post-stratification indicates historical biomass estimates would be similar under the new design
- Effort-reduction simulations show flatfish & gadids remain unbiased; rockfish more sensitive to low effort

D2 GOA Trawl Survey

- The SSC ***finds*** divergent 2023–2025 guild trajectories are within historical variability and likely not attributable to redesign.
- The SSC ***has confidence*** in the 2025 survey results and finds no reason to dismiss or avoid using the survey estimates.

D2 GOA Trawl Survey

- The SSC ***recommends*** that the survey team continue to report the number of stations sampled in different depth strata and rockiness grades (habitats) and identify a broader range of static habitat metrics to compare across years
- The SSC ***requests*** that during the next operational assessment for deep species such as Dover sole, authors specifically examine and describe how the historical survey estimation methodology and estimates compare with those under the new survey design and highlight impacts to the assessment
- The SSC ***recommends*** future analyses of survey changes (GOA, future EBS BTS) consider the impact on composition samples in addition to abundance indices

D2 GOA Trawl Survey

- The SSC ***recommends*** assessment authors, particularly for stocks where sparse sampling is an issue (e.g., some rockfish) should consider whether potential survey changes are likely to impact their species of interest and document any survey-related index or composition discontinuities in SAFE reports

E2 Climate Workplan / Harvest Control Rules

- The SSC received an update on the climate change work plan and a presentation on the Discussion Paper on Development of Alternative Harvest Control Rules (HCRs)
- The SSC ***supports*** the workplan tracking spreadsheet, and looks forward to receiving updates.
    - The SSC ***notes*** consideration should be given to how the climate change research products could be introduced into the Council process: workshops, informational presentations, ESRs and ESPs

E2 Climate Workplan / Harvest Control Rules

- The SSC appreciated the detailed description of existing HCRs for groundfish and crab
- Given the success of current system, the SSC ***recommends*** that any potential changes to the HCRs be initially considered on a stock-by-stock basis

E2 Climate Workplan / Harvest Control Rules

- The SSC ***recognizes*** that there are a number of NPFMC stocks for which there are concerns with current management approach.
  - Stocks with chronic low abundance: Bristol Bay red king crab and Greenland turbot,
  - Stocks that have recently experienced mortality events: snow crab and GOA Pacific cod
  - Stocks with long-term dynamics that are difficult to accommodate under current system: sablefish, pollock, and Pacific ocean perch.

E2 Climate Workplan / Harvest Control Rules

- The SSC ***finds*** a broader suite of potential harvest control rules
  - Could the address the need to be responsive to long-term changes in stock productivity
  - Increase resilience of the management system in under potential climate change
  - Improve the response to shocks to the system.
- The SSC ***recommends*** that BSAI crab have its own timeline for HCR evaluation due to complexities in implementation

E2 Climate Workplan / Harvest Control Rules

- The SSC ***recommends*** that HCR5 and HCR 10 be combined into in single option HCR5/10:
  - Use one parameter for the offset from B40%
  - Use one parameter for the slope of the upper declining segment.
- The SSC ***recommends*** that this generalized HCR be used to approximate various caps on catch when the stock is above target.
- The SSC ***suggests*** that an initial focus on HCR1 and HCR5/10, since HRC7 is more difficult to implement.
- The SSC ***suggested*** the HCR evaluations would focus on EBS/GOA pollock and Pacific cod, sablefish, and to postpone work on Pacific ocean perch to reduce scope

E2 Climate Workplan / Harvest Control Rules

- The SSC ***recommends*** that HCR7 be simplified by:
  - Fixing or removing the parameter that controls the biomass limit of B20%.
  - Linking the parameters that control the fishing mortality limit and biomass target.
- The SSC ***notes*** that unlike HCR5/10, HCR7 would allow the fishing mortality rate to be either lower or higher than the current maximum permissible fishing mortality rate depending on environmental conditions

E2 Climate Workplan / Harvest Control Rules

Performance Metrics

- For communication to the public, the Council, and its advisory bodies, the SSC ***recommends*** that performance metrics be restricted to a relatively small subset
  - The SSC ***encourages*** further exploration of the possibility of adding social indicators to HCR evaluations
- The SSC ***requests*** the opportunity to review the experimental design before the modeling work begins.
- The SSC ***recommends*** that, if possible, all initial and final analyses should go through both Plan Team and SSC review

E3 Economic and Community Indicators

- The SSC reviewed the Groundfish Economic SAFE and Annual Community Engagement and Participation Overview (ACEPO).
- The SSC ***appreciates*** the team's continuing efforts to advance integration of economic, social, and community information into the management process and the recognition of the diverse audience for these data
- Regarding the timing of future SSC reviews, the SSC ***supports*** the staff plan to provide social and economic information relevant to the BSIA standard for TAC setting at the December 2026 SSC meeting and reviewing structure and product development at a meeting with less constrained schedule

E3 Economic and Community Indicators

- The SSC ***discussed*** how the social and economic products can be used to identify the status and vulnerabilities of different entities across scales: community, FMPs, fishery, and fleet.
- The SSC provided a number of recommendations to with the goal to better inform TAC setting in the current year and to make the economic and community information more responsive to current management needs.
    - Improving the timeliness of the Economic Brief as proposed by the authors
    - Efforts for greater automation of ACEPO that could enable use of more current data and more synthetic approach.
    - Including species-specific information in ACEPO

E3 Economic and Community Indicators

- The SSC ***supports*** prioritizing work that identifies substantial changes in fisheries and dependent communities
- The SSC ***supports*** collaborative work that combines or relates Economic SAFE and ACEPO products, noting that such collaborations could tighten the link between the TAC decisions and implications for communities
- The SSC ***supports*** ongoing efforts to improve the socio-economic information used for ESPs.