



NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

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Report from the Joint Meeting of the Groundfish Plan Teams

September 16-17, 2025

BSAI Groundfish Plan Team Members:

Steve Barbeaux	AFSC REFM (co-chair)	Kirstin Holsman	AFSC REFM
Kalei Shotwell	AFSC REFM (co-chair)	Andy Kingham	AFSC FMA
Cindy Tribuzio	AFSC ABL (vice chair)	Beth Matta	AFSC REFM
Diana Stram	NPFMC (coordinator)	Andrew Seitz	UAF
Lukas DeFilippo	AFSC	Jane Sullivan	AFSC ABL
Allan Hicks	IPHC	Steven Whitney	NMFS AKRO
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GOA Groundfish Plan Team Members:

Jim Ianelli	AFSC REFM (co-chair)	Pete Hulson	AFSC ABL
Chris Lunsford	AFSC ABL (co-chair)	Nat Nichols	ADF&G
Sara Cleaver	NPFMC (coordinator)	Jan Rumble	ADF&G
Meaghan Bryan	AFSC REFM	Paul Spencer	AFSC REFM
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Introduction

The Joint meeting for the Groundfish Plan Teams (“Teams”) began on Tuesday, September 16, 2025 at 8:00 am AKDT. This was a virtual meeting conducted remotely via Zoom. Roughly 120 people attended the Joint meeting. All documents and presentations were posted to the Teams’ [electronic agenda](#). All presentations are also linked in the header for each agenda item in this report.

Future meetings: November 10 & 12-14, 2025 (in-person in Seattle); September 21-25, 2026 (tentative), November 16-20, 2026 (tentative).

Council staff updates

Sara Cleaver provided logistical information for the meeting and presented updates on recent and upcoming Council agenda items.

ESR climate update

Elizabeth Siddon, Bridget Ferriss, and Ivonne Ortiz from the Ecosystem Status Report (ESR) team gave a joint presentation updating climate and oceanography information for the EBS, GOA, and AI. The Teams expressed appreciation for the effectiveness and efficiency of the combined large marine ecosystem (LME) report. The Teams also appreciated inclusion of a new slide summarizing the roles of ESR and ESP reports in informing the annual harvest specification process. While the presentation was focused on climate and physical oceanography, there was much discussion on whether to expand on some of the

hypothesized ecosystem impacts during the September report (such information is typically presented in November).

The Teams recommended that in future September reports, the ESR team continue working to link climate trends to ecosystem and groundfish community processes (e.g., recruitment, phenology across groups of species). Elizabeth noted that there is a better understanding of climate-demographic linkages in the GOA, and research would be needed to develop that level of information for the other two LMEs. It was also noted that some of this information appears in other September presentations (e.g., Ecosystem Surveys).

The Teams noted the continued warming trend in the Aleutian Islands, and asked if it has resulted in changes to the composition of zooplankton prey species. Ivonne stated that the only direct information on zooplankton abundance in the AI is from the Continuous Plankton Recorder, but there is some evidence of an increase in temperate species. However, it is difficult to determine at this time whether the observed trends in fish and prey species are directly related to temperature and if there are other contributing factors. It was noted that MOM6 data, which is undergoing regional skill assessment relative to the AI and GOA trawl surveys (with a draft report estimated to be completed in late 2025 or early 2026), may help resolve questions about ocean circulation and bottom temperature when survey information isn't available in the AI and NBS.

ESP and DSEM Update

Kalei Shotwell presented an update on ecosystem and socioeconomic profiles (ESPs) and Grant Adams presented an update on the dynamic structural equation model (DSEM) integration in the Rceattle (R in Climate-Enhanced, Age-based model with Temperature-specific Trophic Linkages and Energetics) platform.

The Teams discussed the timeline for ESP updates in relation to stock biomass variability or potential collapses. The author explained that ESP indicators can be updated annually in the ESP Update and Report Card to best reflect current stock conditions, while the ESP Full is a more comprehensive analysis that cannot be updated as frequently. ESP indicators were described as either predictive or contextual, and a workflow was introduced to improve communication between ESP teams and stock assessment authors. The discussion highlighted how indicators may inform OFL and ABC recommendations, either by influencing recruitment risk scores or being incorporated directly into research and operational models. A prior example was noted in which ESP indicators were used to explain recruitment variability for GOA pollock, with the caveat that indicators should only be applied when supported by strong scientific evidence.

The presentation also described ongoing work embedding DSEM into stock assessments via the Rceattle platform. This approach provides a framework for causal modeling of ecosystem indicators, offering improved accounting of uncertainty and enabling direct evaluation of how environmental drivers influence recruitment and productivity. The first applications to GOA pollock showed substantial reductions in unexplained recruitment variability, and extensions are being developed for other stocks such as arrowtooth flounder and Atka mackerel. Jeremy Sterling from the Marine Mammal Laboratory asked what information from marine mammals could be added to the multi-species model run in Rceattle. The Teams discussed examples where marine mammal information was included and avenues to contribute to these models. It was also suggested that the multi-species authors provide information on whether ice seals could be included in the multi-species model in November.

The Teams acknowledged the utility of the new predictive/contextual classification system for indicators and the proposed communication workflow. The Teams discussed the challenge of incorporating the predictive and contextual information into ABC determination. While it is better understood to formally

include predictive indicators in a model, there is no framework for how to use the contextual information when multiple indicators are suggesting poor conditions to alter the ABC. **The Teams recommended developing a multi-variate indicator that synthesizes the contextual ecosystem time series to measure how anomalous the current year is relative to historical conditions.** The Teams also suggested that this synthesis could be expanded with a cluster analysis similar to the temperature cluster analysis approach presented in the Ecosystem Status Report by Kelly Kearney. Members also expressed interest in the potential for DSEM integration to provide a structured pathway for ecosystem variables to directly inform assessment models and projections.

Ecosystem Surveys

Rob Suryan presented an update on ecosystem surveys, some of which were still ongoing at the time of the meeting. He noted that the M2 mooring data, which is normally presented in the Ecosystem Status Report, were presented here because the data were recovered later this year and not ready in time for the ESR report.

The Teams asked if the high densities of age-0 pollock could be in response to the survey timing. Rob explained that not only were the densities of age-0 pollock high, but the prevalence was as well. He also noted that the catch of salmon on the shelf was high this year.

There was also discussion concerning work to synthesize the age-0 pollock and Pacific cod GOA larval indices, in essence creation of an offshore/onshore combined index. Lauren Rogers noted that work has been completed on these indices and were linked in the presentation, however mechanistic models remain to be developed. **The Teams recommended that these combined indices be provided in future presentations.**

Questions were raised about the potential for sampling in Southeast Alaska since the gyres appear to force larval fish to the Southeast. The presenters explained that some larval fish are transported to the Southeast, which explains why some genetics do not match the region of collection, but the overall larval transport is small to the Southeast. Expanded sampling in the Southeast would be helpful, but not at the expense of sampling the existing areas which are more important.

Longline Surveys

Kevin Siwicke presented the AFSC longline survey results. The Teams discussed the implications of the change in survey design and that only the GOA was sampled, the Bering Sea and Aleutians were not surveyed in 2025. A question was raised about whether reduced sampling affected uncertainty in the RPNs for GOA species, including sablefish; Kevin noted that dropping these two stations had minimal impacts on GOA RPNs and that the change in what areas were surveyed would be addressed further in the sablefish assessment presentation.

The Teams noted the value of surveying the Aleutian Islands and Bering Sea regions in the same year to better evaluate regional trends. At the same time, they recognized that this change will complicate the sablefish stock assessment since it is conducted on an Alaska-wide basis. The Team discussed options for handling sablefish data gaps in non-survey years and noted that the current plan is to keep the Bering Sea and Aleutian Islands RPNs fixed at 2023 levels, the last year the Bering Sea was surveyed (Aleutians were sampled in 2022 and extrapolated in 2023). Additional considerations may be brought forward in future sablefish assessments.

Questions were raised about the change in survey timing and how survey leads usually coordinate with the fleet to reduce interactions between commercial fishing and survey operations. Kevin acknowledged these challenges, noting that fleet presence near survey stations can influence catchability and potential

whale interactions. He noted that communication with the fleet was different this year due to the delayed start of the survey, to which the Team commented that interaction effects might be worth further investigation.

Data limited methods working group (DMLWG) Updates

Cindy Tribuzio presented updates from the Data-Limited Methods (DLM) Working Group, summarizing ongoing efforts to refine approaches for priority stocks including Pacific sleeper shark and the GOA octopus complex. The presentation reviewed the application of the ORCS framework to Pacific sleeper shark, with continued refinement of attribute weighting and planned sensitivity testing, and described progress toward developing a decision tree approach for the octopus complex. The decision tree framework involves identifying potential indicators (e.g., octopus catch relative to Pacific cod catch, area of occupation), testing their appropriateness through simulation and sensitivity analysis, and producing an “indicator report card” to communicate trends in stock status.

In discussion, the Teams emphasized support for continued development of these data-limited methods under the Tier 6 harvest control rule. **The Teams recommended that the DLM Working Group continue to explore the methods described in the report, along with other data-limited approaches, in the context of Tier 6 management.** Members also agreed with the anticipated work plans for Pacific sleeper shark and GOA octopus. **The Teams recommended that the decision tree approach for GOA octopus proceed, while encouraging the authors to conduct simulations and power analyses to better evaluate the robustness of the approach.**

There was additional discussion about the flexibility of the decision tree framework. A Team member asked whether ABC could be increased if all indicators were positive. Cindy clarified that the current framework does not include this option because the method already sets ABC at the maximum permissible level, but noted that future iterations could incorporate additional outcomes, such as adjusting the OFL/ABC buffer or adding PSA steps.

Harvest Control Rules

Diana Stram and Kirstin Holsman presented an overview of the June SSC harvest control rule (HCR) workshop on behalf of the Council and the ACLIM and GOA-CLIM teams. This included: 1) the impetus for the HCR workshop, which was based on recommendations from the Climate Change Task Force (CCTF); 2) an overview of the suite of models that have been developed to evaluate HCRs and ecosystem caps; 3) the HCRs and ecosystem cap evaluations that are currently underway, and the species and four HCRs of interest for further evaluation, which were recommended by the SSC. Additionally, they described the development of a workplan for the HCR evaluation process that will be presented to the SSC in February 2026.

The presenters elicited feedback from the Plan Team about the HCRs considered for evaluation. This included considerations on: which stocks or species to cover, the types performance indicators to use, and key things to include in the workplan. The Teams noted the need to focus on species that are most susceptible to environmental change. The Teams agreed with the SSC that focus should be on Pacific cod, pollock, sablefish, snow crab, and Bristol Bay red king crab. They further recommended adding Pacific Ocean perch. The Teams recommended that demographic factors beyond recruitment (e.g., growth) be included in the models when evaluating HCRs. This is to ensure the models adequately simulate the degree of uncertainty in how populations respond to environmental changes.

With regard to the workplan, the Teams recommended that a key feature should be the development of a framework for implementing alternative HCRs. Such a framework would include umbrella actions based on evaluations of relevant indicators. For example, the framework could include options for fallback

actions should *exceptional circumstances* occur. Such actions (sometimes referred to as meta-rules) would provide guardrails when a simulation-tested HCR appears to be straying from expectations (e.g., if an adverse event occurs or productivity has clearly changed). **The Teams recommended that a Joint Team meeting be conducted in early 2025 (January) to review and recommend alternative frameworks for when different HCRs could be triggered.**

The Teams also discussed some details on the impact of lags (e.g., on sea surface temperature) for HCRs that would use that type of data. They also noted that some provisions might be appropriate that consider a breakdown in the regulatory aspects and other forms of "implementation error." The Team discussed the potential for control rule 'shopping' to obtain short-term objectives and the necessity to guard against frequent switching among HCRs for such purposes. These types of considerations can be developed further at the planned team meeting.

Sablefish Management Strategy Evaluation (MSE) Updates

Joshua Zahner presented ongoing development of a management strategy evaluation (MSE) framework for sablefish. The MSE explores alternative harvest control rules under conditions of highly variable recruitment and evaluates tradeoffs in population resilience and fishery performance.

In discussion, the Teams noted the importance of incorporating economic considerations into the framework. It was suggested that analysts consider price elasticity in relation to imports, given the effect that catch abundance can have on market prices and how this may influence the degree to which catches should be buffered under variable recruitment. Joshua responded that the current framework already captures some variation in price related to catch but that data limitations may preclude developing more complex economic performance metrics at this time. The Teams also suggested evaluating the implications of simulated fishery closures and noted that realized fishing mortality rates may be lower than values obtained from the harvest control rules, which may not necessarily account for fishery closures at low stock sizes.

The Teams encouraged the development of unified performance metrics to facilitate communication of MSE results to managers and stakeholders. For example, presenting results in terms of the proportion of time a stock remains within the "green" region of a Kobe plot would allow for straightforward comparisons of management strategies against agreed-upon objectives.

Pacific Cod Research

Steve Barbeaux, Pete Hulson, Julie Nielsen and Ingrid Spies gave an overview of ongoing and planned Pacific cod research , including updates on satellite tagging studies, genetic evaluations, western GOA and Bering Sea assessment research, explorations of western GOA-Bering Sea apportionment, and western Bering Sea catch and population trends. The Teams appreciated the update and support the work and will communicate with the Pacific cod team directly about ideas for next steps.

Sablefish

Dan Goethel and Matt Cheng summarized major updates to the Alaska sablefish stock assessment. They described the transition from ADMB to the R-TMB/SPoRC modeling framework, fixing coding issues, disaggregating age compositions by sex, and reevaluating data inputs and assumptions. The author-recommended model (25.12_Drop_TS_Upd_M) removes the Gulf of Alaska trawl survey index and adopts a lower natural mortality prior, leading to apparently more biologically consistent results, reduced retrospective recruitment bias, and greater model stability. Sensitivity analyses explored time-varying growth, selectivity, and a spatially explicit model, highlighting potential avenues for future refinements. The presentation also included a counterfactual analysis of the new longline survey design

(alternating GOA and BSAI coverage), showing that while short-term impacts may be limited, extrapolation of unsurveyed regions could increase advice uncertainty.

The Teams discussed challenges with understanding how age-composition and surveys were weighted. They highlighted that some aspects of the identified “data conflicts” between length compositions and ages are more likely assumptions about growth since the model involves a specified age-length conversion matrix. The Teams noted that care should be taken when Francis re-weighting is used in fitting split-sex data components since the composition data are normalized over both sexes (proportions by age and sex sum to 1.0 by time interval). **The Teams recommended clarifying and documenting the results of Francis reweighting and include tables of input sample sizes and final effective sample sizes. This also extends to the indices since multipliers appear to remain in use (i.e., “lambdas”; it is better to report the variance or CVs implied).**

The Teams also raised concerns that mismatches among indices, lengths, and ages may reflect misspecified growth, as sablefish growth has shifted rapidly in recent years. **The Teams recommended comparing empirical length and weight-at-age directly with modeled estimates.**

The lack of fit to fishery composition data remains substantial and the Teams discussed options for dealing with this, emphasizing that it represents real observations and fish removals. There were a few years with an unusual amount of large fish coming from the Aleutian Islands. One option would be to allow the composition data to represent removals precisely (VPA-style) for the years where the anomalous ages were targeted. This would remove the influence on other aspects of the model (e.g., natural mortality estimates and recruitment) yet still account for the fishing mortality. **The Teams recommended testing approaches where fishery composition data inform removals only rather than population structure or recruitment.** Another way this could be achieved would be through exploring more flexible annually varying fishery selectivity.

Discussion also covered natural mortality (M), survey indices, and spatial modeling. Lower M improved fits to the plus group, but profiles show conflicts between datasets. In particular, the “other” likelihood component was apparently most influential. The Teams noted this could be more clearly presented.

The Teams noted that the trawl survey provides scale information (via area-swept expansions) and that may be lost if it is dropped. Dan responded that the RPNs provided by the longline survey do contain some information on scale as they are extrapolated to area.

The Teams expressed concern that the new biennial longline survey design will reduce the ability to track recruitment. They suggested evaluating two options: treating the indices as combined, which would require strong assumptions about constant proportions across areas, or maintaining region-specific indices (e.g., BSAI, GOA) that could serve as “bookends.” The Team also noted that the current time-block structures (for the movement modeling that was covered briefly) may be improved by exploring smoother alternatives, such as models linked through covariates.

For November the Teams recommended bringing forward the RTMB continuity model and Model 25.12 (“Drop_TS_Upd_M”) for November.

NMFS inseason management

Steve Whitney and Abby Jahn provided a brief informational overview of in-season management information for the BSAI and GOA. It was noted that recently in-season actions are taking longer to complete and thus staff may need to begin actions for area and fishery closures sooner than previously done to be more conservative. This however presents a greater potential of stranding the harvest of some species.

Questions arose from the Teams regarding recent increases in non-target catches of rockfish in the BSAI. In particular the composition in the other rockfish complex of the recent increased catches and noted increased fleet behavior regarding BSRE complex avoidance. Steve noted that shortspine thornyheads comprise more of the incidental catch in the POP fishery while dusky rockfish comprise the majority of the incidental catch in the Atka mackerel fishery. Increased fleet avoidance behavior has been observed in the POP fishery for BSRE given recent ACL overages and the Council's consideration of modifications to Accountability Measures at the October Council meeting. The Teams had no additional recommendations.

Spatial Apportionment

Sara Cleaver provided a presentation on proposed modifications to how spatial apportionment information is communicated and provided in the groundfish harvest specifications process. The presentation was intended to be generally informational only of clarifications and potential changes that will be considered by the Council in October 2025. However it was noted that given the Teams' previous request for direction on spatial apportionment recommendations that any suggestions or concepts to flag for improved clarification would be welcome.

The proposal is to provide a new terminology, Biologically-informed Recommended Distribution (BRD), to refer to a spatial apportionment of a stock or stock complex below the stock wide ABC (formerly referred to sub-area ABCs). She noted that these BRDs would be recommended by the author, Plan Teams, and SSC during the specifications process (as subarea apportionments always have been) and would be used to assist the Council in setting TACs by subarea

The Council sets TAC \leq ABC for any stock (or stock complex) but has always retained the ability to set TACs in any area provided the sum of the area-specific TACs do not exceed the ABC. This proposal is intended to clarify that authority while providing explicit scientifically-based recommendations as needed for recommending region specific catch levels.

The proposal largely stemmed from situations where non-target stocks that were poorly estimated by surveys resulted in reduced spatial apportionments in some areas. Reduced TACs as a result of small BRDs can constrain target fisheries when stocks go on PSC status. In such cases, the Council may ask for further information regarding whether there would be stock structure concerns or other biological rationale if TAC deviated above the BRD in some areas. It is anticipated that these occasions would be the exception rather than the rule and employed in situations like the one described and not to shift catch of a stock entirely into one area from another.

The Teams requested clarification on whether fish could be re-allocated across areas. Staff clarified that this is generally true but for rare occasions (e.g. non-specified reserves for some species in the BSAI that cannot be shared across regions and the regulatory constraints in the CGOA rockfish program).

The Teams requested that, when available, documentation describing the rationale for when and how a BRD is specified be provided to the authors and the Teams. This information may also be useful to include in the SAFE intro to provide guidance for when the distribution of potential catch might be flexible (i.e., exceed an area's BRD) based on the level of reliability or importance of a BRD. The Teams noted that area apportionment of catch was historically used as a precautionary approach to acknowledge unknown stock structure and mitigate against the potential for localized depletion.

Halibut DMRs

Michael Fey provided a presentation on Pacific halibut discard mortality rates (DMRs). There were no changes to the DMRs for this year, and the observer estimate methodology was also the same as last year.