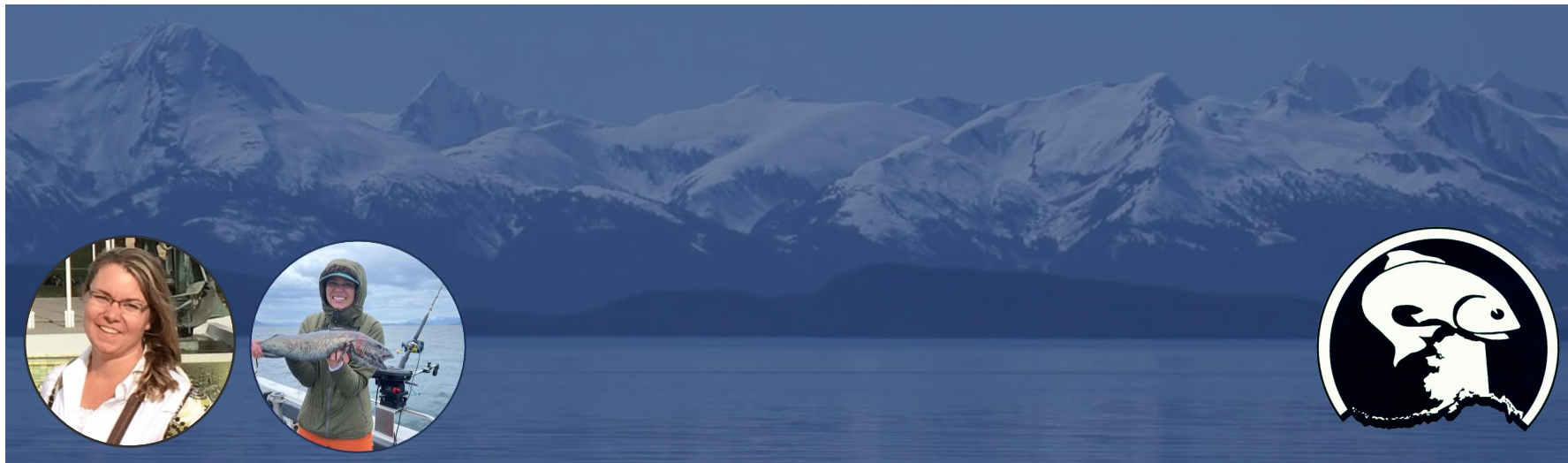

Introduction to C3 Proposed Groundfish Harvest Specifications Joint, GOA, & BSAI Plan Team Reports

October 2026, SSC



SSC actions:

- 1) Provide recommendations for OFLs, ABCs, BRDs for proposed rulemaking for GOA and BSAI Groundfish stocks (rollover from 2026 final rules)
- 2) Provide final OFL, ABC, BRD recommendations for *select stocks*, (to be included in Dec final specifications tables).
- 3) Provide recommendations on proposed models for Nov/Dec assessment review
- 4) Receive update on compiled SSC requests on HCRs 2025-2026, timeline for further work in 2026-2027 (provide feedback on May plans) and JPT recommendations; action as needed (part of Joint PT report)



Stocks with proposed models being reviewed at this meeting:

- Sablefish
- EBS pollock
- BSAI Greenland turbot
- BSAI Yellowfin sole
- EBS cod
- GOA pollock
- GOA DSR
- GOA thornyhead

The SSC is scheduled to review SAFE chapters and provide final BRD/ABC/OFL recommendations for 2027-2028 for the following stocks at this meeting:

Full or Update Assessments

- Bogoslof pollock
- GOA arrowtooth flounder
- GOA rex sole
- GOA skates

Harvest Projections

- AI pollock
- BSAI northern rock sole
- BSAI Kamchatka flounder
- BSAI northern rockfish
- BSAI flathead sole
- BSAI arrowtooth flounder
- BSAI Alaska plaice
- GOA dusky rockfish
- GOA flathead sole
- GOA shallow-water flatfish, incl. northern & southern rock sole
- GOA deepwater flatfish

SSC will not review these stocks in December.

AP/Council will not be providing TAC recommendations for these stocks at this meeting. They will in December, along with 2027-2028 TACs for all other groundfish stocks.



C-5c Council motion

Process for Spatial Apportionments of Groundfish TACs

October 7, 2025

The Council supports the process described by staff for spatial apportionment of groundfish in the harvest specifications process and requests Council staff provide written guidance to the Plan Teams and SSC as appropriate:

- Spatial apportionment of ABCs will be renamed BRDs (biologically-informed recommended distributions) instead of subarea ABCs, to indicate that the spatial apportionment is based on SSC recommendations to spatially apportion the harvest based on survey or catch data, consistent with status quo.
- SSC calculations for spatial apportionment (BRDs) will continue to be based only on biological information, not socio-economic information (status quo).
- SSC recommendations for spatial apportionment (BRDs) will continue to inform the Council's recommendations on spatial apportionment of TACs. The spatial apportionment of TACs can also include socio-economic factors (status quo).
- The overall intent is for the Council to continue apportioning TACs to mirror the BRDs, similar to past practice.
- If the Council anticipates any stocks or stock complexes where it may want to deviate from BRDs when setting TACs, it intends to use the October/December harvest specifications process to seek quantitative or qualitative input from the Plan Teams and SSC. Useful information from the SSC could include whether the previous year's BRDs, or small changes from the current SSC-recommended BRDs, would be likely to result in biological impacts to the stock or stock complex.



C3 Joint Groundfish September Plan Team Report

Steve Barbeaux, Sara Cleaver, Jim Ianelli, Chris Lunsford,
Kalei Shotwell, Diana Stram, Cindy Tribuzio



October 2026, Presentation to the SSC



NOAA
FISHERIES

Groundfish Plan Team Meeting, Sept 8 - 11, 2026

BSAI Groundfish Plan Team Members:

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

GOA Groundfish Plan Team Members:

Jim Ianelli	AFSC REFM (co-chair)
Chris Lunsford	AFSC ABL (co-chair)
Sara Cleaver	NPFMC (coordinator)
Meaghan Bryan	AFSC REFM
Abby Jahn	NMFS AKRO
Craig Faunce	AFSC FMA
Lisa Hillier	WDFW
Pete Hulson	AFSC ABL
Nat Nichols	ADF&G
Paul Spencer	AFSC REFM
James Thorson	AFSC REFM
Sophia Wassermann	AFSC RACE
Ben Williams	AFSC ABL



Joint Groundfish Plan Team (JPT) Meeting Overview

- Met Tuesday, September 8-9, 2026 at 9:00 am AKDT
 - In-person with virtual participants, Team's [electronic agenda](#)
 - Presentations are linked in the header (in report)
- Future meetings:
 - November 16-20, 2026
 - Teams discussed 2027 meeting dates:
 - Multiple September options (7-10, 13-17, 20-24), TBD
 - November 15-19, 2027

Issue of Veterans day and Thanksgiving week and proximity of Council meeting in 2026/27



JPT Presentation Summary

Topic	Presenter	Type	Recommendations
AFSC Update	Melissa Haltuch	Informational	Yes
ESR Climate Update	Bridget Ferriss	Ecosystem	No, already reviewed
ESP and DSEM Update	Kalei Shotwell	Ecosystem	Yes
Longline Survey	Pat Malecha	Survey	No
Harvest Control Rules Update	Diana Stram + co-authors	Informational	Yes
Alaska Sablefish	Dan Goethel, Matt Cheng	Proposed Full Models	Yes, 3 proposed models
Pacific Cod Research Updates	Steve Barbeaux, Pete Hulson	Informational	No
Inseason Management Updates	Steve Whitney, Abby Jahn	Informational	No
Halibut DMRs	Mike Fey	Proposed Specs	Yes

AFSC Updates

- Proposed process for adding September model updates
 - Making stepwise changes of structure followed by adding all available data, then any model changes resulting from adding new data
 - Useful for less frequent assessments, reduces workload in October, reduces potential October model fitting issues
- Simplify projection scenarios & standardize projection model
- Provide standard set of summary slides for presentations
- Notable reduction in age data for 2026

Thanks to Melissa Haltuch



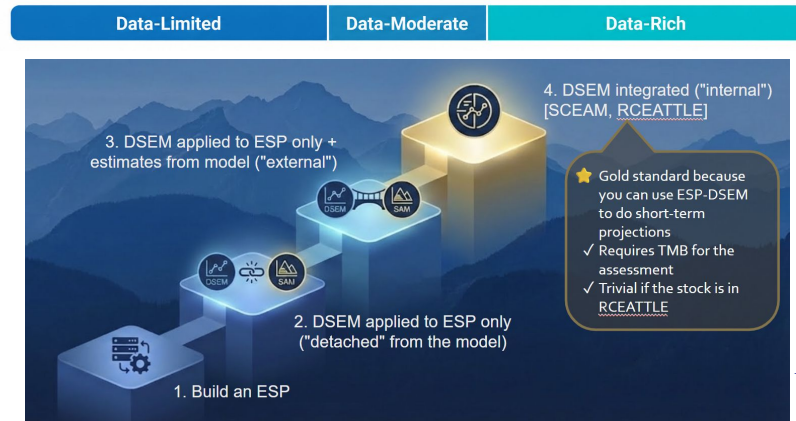
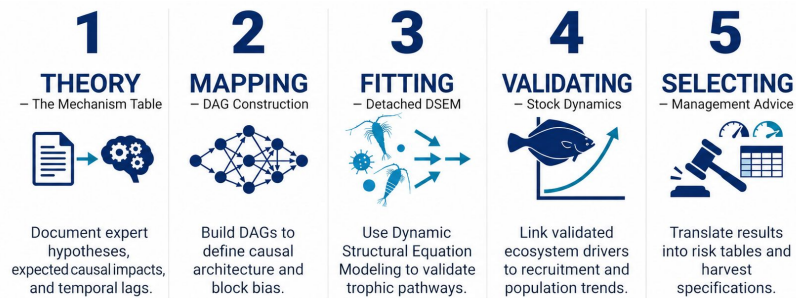
AFSC Updates

- Discussion:
 - Need for data update process and protocols, author discretion on data pull timing
 - Supported standard projection scenarios and summary slide template for authors
 - Concerns regarding reduction in ageing capacity by 40%
- Recommendations:
 - AFSC leadership work with authors to provide general protocols in the guidelines for September data retrieval
 - Increase AFSC ageing capacity and maintain age sample reading



Ecosystem and Socioeconomic Profiles

- Structural-Causal Workflow
 - Formalize five steps from mechanism table to model validation/selection
 - Establishing suite of diagnostics
- Multiple Levels of Application
 - Building an ESP to integrated within the operational assessment model
 - Level 3 and 4 examples in GOA



Thanks to Kalei Shotwell

Ecosystem and Socioeconomic Profiles

- Discussion:

- Timeline for integrating ESP products into stock assessment including evaluating stability when adding new data and appropriateness of DAG structures
- Development of DSEM prior to finalizing ESP, but collaborative approach is key to developing vetted mechanism tables and associated DAGs
- Limitations of staffing capacity to complete ESPs and review the products

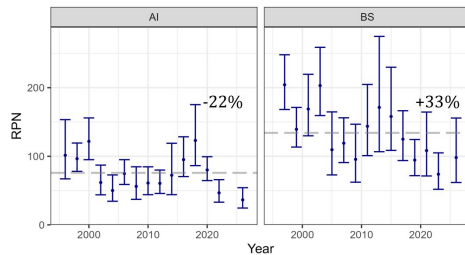
- Recommendations:

- Add a step to the workflow to document available evidence for linkages among variables and for both Teams to review the workflow jointly
- Expanding or creating new ESPs be supported by dedicated staff time rather than relying on stock assessment authors

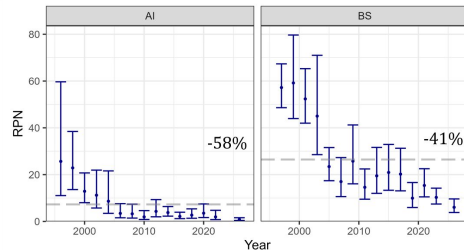
Longline Survey

- Sampling in GOA in odd years, BSAI in even years (16 BS, 14 AI in 2026)
- 234,900 hooks fished, 32,816 lengths, 1,149 sablefish otoliths, tagged 1,371 sablefish, 36 SST, 8 greenland turbot
- 56 temp-depth profiles, sub- surface temps (~250m) near avg in both Bering Sea and Aleutians
- Pacific cod down in AI, up in BS, GT down both, Shortraker up both, and REBS up AI down in BS

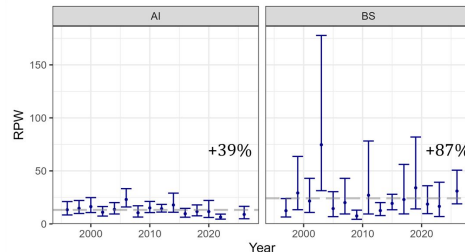
Pacific cod



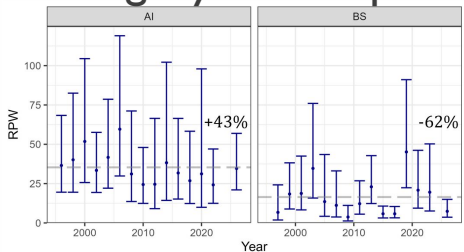
Greenland Turbot



Shortraker



Rougheye/Blackspotted



Thanks to Pat Malecha

Harvest Control Rules

Paper on Risk and uncertainty in Groundfish and Crab specifications process and development of alternative Harvest Control rules reviewed by SSC and Council June 2026.

[HCR May 2026](#)

Led to request for JPT presentation on draft results and overview of sablefish MSE.

Details from Council motion on next steps:

- Support for continued HCR work leading to Council discussion on May 2027 beginning with request for JPT presentation on draft results
- Support the objectives provided by staff for purposes of the synthesis and initial review of performance metrics used to determine how alternative HCRs perform compared to status quo.
- Priority on evaluations for pollock and Pacific cod (BSAI and GOA) and Alaska sablefish.
- Develop communication and engagement strategy
- Address SSC recommendations from 2025-2026



High Level SSC recommendations (slide 1 of 2)

HCR structure/design

- Test a small, targeted subset of HCRs rather than a wholesale overhaul, and evaluate changes stock-by-stock rather than across all stocks at once.
- Compare cap-like HCRs (e.g., HCR-5, HCR-10) against flat-Fmort HCRs (e.g., HCR-1/status quo) and environmentally-varying HCRs (HCR-7).
- Combine HCR-5 and HCR-10 into a single HCR (one parameter for the B40% offset, another for the exponential F decline slope), since the two are redundant in shape/intent.
- Don't limit alternative HCRs to climate indicators alone (as HCR-7 does) — the framework should also flex to TAC trends, biomass trajectories, recruitment signals, risk-table concerns, and socioeconomic factors, since management risk isn't only ecosystem-driven.
- Favor HCRs robust across a range of conditions over rules that switch on/off in response to specific uncertain conditions.



High Level SSC recommendations (slide 2 of 2)

Climate/environmental scenarios

- Clearly define and communicate the scientific basis for warming scenarios; include most-likely scenarios plus mild-to-extreme bracketing scenarios.
- Timeframes should span both near-term (business/community relevance) and longer-term forecasts.
- Consider group-specific reference points reflecting life-history heterogeneity across species.

Modeling process

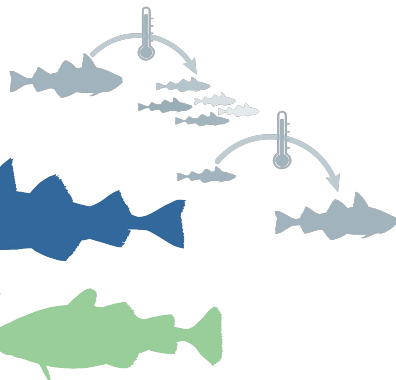
- SSC wants to review the experimental design before modeling begins: which models per species, which forcing scenarios, and how environment-biology links are modeled.
- Clearly identify which modeling platforms are used and flag where approaches diverge substantively (e.g., GOA Pacific cod trends under high-warming vs. other scenarios).
- Timetable should allow both Plan Team and SSC review of initial and final analyses.

Performance metrics & communication

- Keep public/Council-facing metrics few and targeted to highlight key tradeoffs.
- Add economic metrics (catch stability, total value over time) alongside total catch.
- Explore adding social indicators, with attention to how to communicate them for decision-making.
- Develop a communication plan for non-technical audiences.



ACLIM Sneak Peak (*draft results, do not copy*)



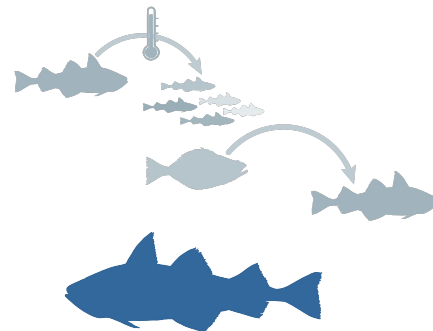
Multispecies Assessment model

- Age structured s
- 3 EBS stocks, P arrowtooth
- ROMSNPZ forces phytoplankton. & zooplankton
- BT drives predator energetics and vonB growth (projections)
- Rec $\sim f(\text{ROMSNPZ indices})$



EBS Food web model

- ROMSNPZ forces phytoplankton production
- BT drives predator energetics
- Rec functional responses emergent



Env. enhanced Pollock model

- stock assessment
- stock
- multi-sub areas where predator (ATF) biomass drives M
- BT drives predator energetics
- Rec $\sim f(\text{SST indices})$

SNEAK PEEK, not final results!



Holsman et al. in prep
Holsman et al. 2024,2020,2016

Whitehouse et al. in prep
Whitehouse et al. 2021

Spencer et al. in prep
Spencer et al. 2016

High level summary of sneak peak results

High level DRAFT results shown for Multispecies Runs and food web model runs for HCRs 1,5, 10, 7

- Draft simulations used assumptions of SQ warming, optimistic (slight) warming, pessimistic (increased) warming, and no change (mean of historical conditions)
- MOM6 model climate predictions to be used in the future
 - Stakeholder suggestions that review of MOM6 and better understanding of robustness would be useful moving forward
 - Aligns with SSC recommendations to review model platforms and forcing scenarios
- Generally HCR 1 is robust but draft results of 5 and 10 indicate may provide additional benefits for *some* stocks
 - Differences from HCR 1 (status quo) are minor relative to changes in TAC or effects of the 2MT cap in the EBS (pollock)
 - HCRs with B20 cutoff result in higher SSB but also higher volatility in catch
 - HCRs 5 and 10 (cap like HCRs) stabilize catch and SSB (reduce volatility) but also reduce mean Catch
 - HCRs 5 and 10 increase age class diversity
 - HCR 7 linked to climate increases volatility but may also increase catch, more nuanced parameterization is underway
- HCR 7 still needs some formulation to address objectives. Team discussion of some of these items with HCR internal team to continue to work on HCR7 formulations
 - HCR 7 linked to climate increases management responsiveness but may also increase catch and help stabilize biomass, more nuanced parameterization is underway



What to bring back in May 2027? *Staff still working on this.*

- Final HCR simulation results available Fall 2027 [not possible to incorporate into a May Discussion paper]
- May discussion paper to SSC will include HCR team responses to compilation of SSC and Plan Team recommendations 2025-2026
 - Review of MOM6 and other modeling platforms?
- Potential to take up sablefish HCR separately given draft MSE results to date and stakeholder meeting for January 2027 (TBD) while CLIM HCR results being finalized
 - Preliminary CLIM results seem to indicate that HCR considerations will be for a subset of species therefore species specific HCRs and may be iterative analyses
 - Focus engagement efforts on what is robust about status quo and where incremental changes recommended



Harvest Control Rules

- Discussion

- Team discussed HCR7 formulation and the uncertainty in projecting environmental co-variate and that less frequently assessed stocks are a bigger concern given the longer period necessary for forecast
- Discussion of performance metrics, stakeholder engagement, and outlier events (e.g., marine heat waves)
- Regarding Sablefish MSE the Teams discussed the stability of the movement model and economic data limitations in the MSE

- Recommendations:

- **Consider three additional types of performance metrics: 1) how often the stock collapses, 2) how quickly the stock rebuilds if below a certain threshold, and 3) how often catch (or ABC) falls below a defined threshold (or is zero).**
- **Present a progress report on stakeholder involvement following an engagement strategy**
- **Simulating conditions similar to this event to determine performance of the HCRs at the extremes.**

Alaska Sablefish: Proposed models

- Full assessment in November / December
- Switch to Author Slides

Thanks to Dan Goethel and Matt Cheng



Alaska Sablefish

- Discussion:

- Persistent difficulties in fitting the plus group in all models, less pronounced in recent years, consider investigating age-varying natural mortality
- Carryover assumption required to construct the Alaska-wide survey index, discussed potential to use REMA for future single region models, but only addresses the index
- Appreciated update regarding the change in apportionment method due to survey design change and noted that decisions on ABCs and BRDs are evaluated in November

- Recommendations:

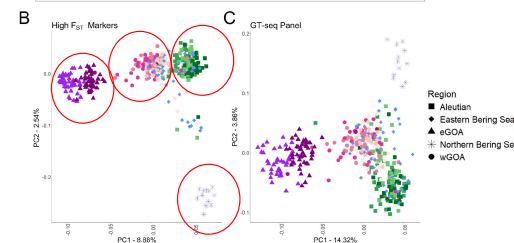
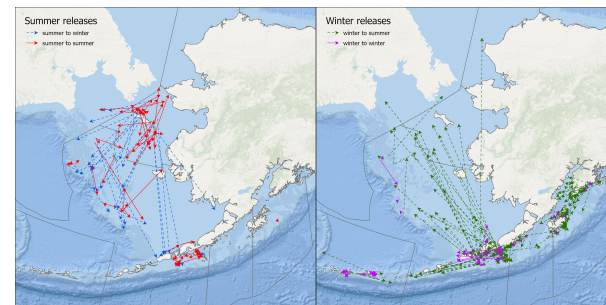
- Agreed with author to bring forward 3 models for November: Model 26.2_FAA (fleets-as-areas), Model 26.1_1Reg (updated single-region), and Model 25.12_1Reg_Cont (continuity/base)
- Avoid further reductions in longline survey coverage and age data collection, maintain current levels



Pacific Cod Research



- Pacific cod spatial work is shifting toward connectivity, SPoRC, tagging, and MSE.
- EBS/WGOA connectivity supported by tagging and genetics
- SS3 spatial models show confounding among spatial processes
- SPoRC viewed as better suited for spatial hypothesis testing
 - Initial WGOA/EBS +CGOA SPoRC model development and exploration by Matt Cheng in process
 - Continued development and testing through 2027 assessment cycle with serviceable model available for 2028 assessment cycle
- More tagging needed, especially spatial coverage in the Bering Sea TBD



Thanks to Steve Barbeaux and Pete Hulson

Inseason Management

- Steve Whitney provided an overview of BSAI inseason management, noting broad decline in fishery utilization in recent years and continued reductions in active A80 vessels
- Abby Jahn provided an overview of GOA inseason management, noting shifts in utilization for pollock and Pacific cod and review of some rockfish and skate catches
- No recommendations by the Teams



Halibut Discard Mortality Rates (DMRs)

Area	Gear	Operation	2026 DMRs (specified)	2027/28 DMRs (recommended)
BSAI	Pot	All	19% ^b	18% ^b
	Hook-and-line	CP	10%	9%
	Hook-and-line	CV	10% ^a	10% ^a
	Non-pelagic trawl	Mothership / CP	86%	84%
	Non-pelagic trawl	CV	62%	64%
GOA	Pot	All	29% ^b	36% ^b
	Hook-and-line	CP	12%	8%
	Hook-and-line	CV	15% ^c	15% ^c
	Non-pelagic trawl	Mothership / CP	79%	86%
	Non-pelagic trawl	CV	62%	50%
All	Pelagic trawl	All	100%*	100%*

Thanks to Michael Fey (AKFIN) and other Halibut DMR Working Group members: Jen Cahalan (PSMFC), Jason Jannot (NMFS AFSC), Krista Melani (NMFS AKRO), Jason Gasper (NMFS AKRO), Ian Stewart (IPHC)

Thank You!



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