

# C3 Bering Sea Aleutian Islands Groundfish September Plan Team Report

Steve Barbeaux, Kalei Shotwell, Diana Stram, Cindy Tribuzio



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# BSAI Presentation Summary (Sept 10-11, 2026)

| Topic                           | Presenter                              | Type                 | Recommendations |
|---------------------------------|----------------------------------------|----------------------|-----------------|
| EBS Bottom Trawl Survey         | Duane Stevenson                        | Survey Update        | No              |
| AI Bottom Trawl Survey          | Susanne McDermott                      | Survey Update        | No              |
| EBS Acoustic Survey & AVO Index | Abigail McCarthy, Nathan Lauffenburger | Survey Update        | No              |
| Harvest Projections             | Melissa Haltuch                        | Final Models         | No              |
| Bogoslof Pollock                | Jim Ianelli                            | Update Model, Final  | No              |
| EBS Pollock                     | Jim Ianelli                            | Proposed Full Models | Yes, 2 models   |
| Yellowfin Sole                  | Ingrid Spies & Meaghan Bryan           | Proposed Full Models | Yes, 3 models   |
| Greenland Turbot                | Meaghan Bryan                          | Proposed Full Models | Yes, 4 models   |
| EBS Pacific Cod                 | Steve Barbeaux                         | Proposed Full Models | Yes, 2 models   |
| Proposed Specifications         | Steve Whitney                          |                      |                 |
| General Discussion              | Team                                   | Informational        | No              |

# Eastern Bering Sea Bottom Trawl Survey

- 2026 EBS shelf survey completed all 350 standard stations
- NBS survey not conducted in 2026; EBS/NBS both scheduled for 2027
- Surface/Bottom temps coldest since 2013, cold pool largest since 2012
- Biomass for most species stable or increasing, pollock volatile, skates <
- Updated effort calculations changed 2024–2025 biomass indices ~3–4%

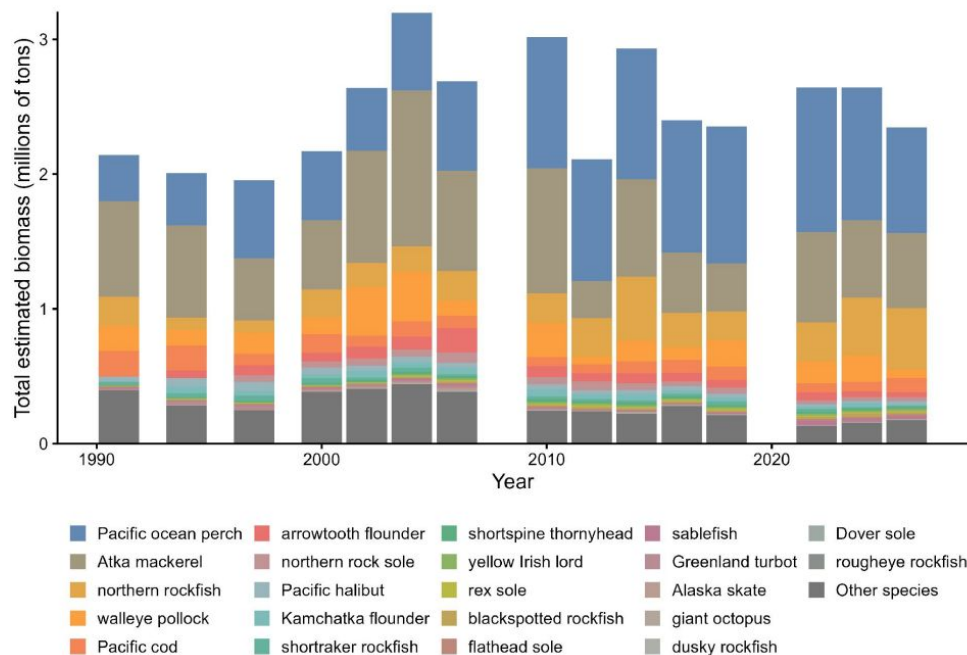
Thanks to Duane Stevenson

| Common Name         | x1000      | 2025      | 2026       | % Change |
|---------------------|------------|-----------|------------|----------|
| Alaska plaice       | Biomass    | 321       | 388        | 21       |
|                     | Population | 563,791   | 773,430    | 37       |
| Alaska skate        | Biomass    | 384       | 318        | -17      |
|                     | Population | 108,901   | 82,574     | -24      |
| arrowtooth flounder | Biomass    | 472       | 479        | 1        |
|                     | Population | 643,019   | 656,696    | 2        |
| Bering flounder     | Biomass    | 12        | 11         | -7       |
|                     | Population | 69,821    | 71,380     | 2        |
| flathead sole       | Biomass    | 686       | 784        | 14       |
|                     | Population | 2,187,918 | 2,568,110  | 17       |
| Greenland turbot    | Biomass    | 5         | 10         | 88       |
|                     | Population | 1,536     | 2,424      | 58       |
| Kamchatka flounder  | Biomass    | 32        | 42         | 32       |
|                     | Population | 70,129    | 84,194     | 20       |
| northern rock sole  | Biomass    | 1,433     | 1,818      | 27       |
|                     | Population | 7,506,132 | 10,708,073 | 43       |
| Pacific cod         | Biomass    | 548       | 622        | 13       |
|                     | Population | 496,520   | 391,636    | -21      |
| Pacific halibut     | Biomass    | 129       | 123        | -4       |
|                     | Population | 77,421    | 73,806     | -5       |
| Pacific ocean perch | Biomass    | 11        | 33         | 190      |
|                     | Population | 11,920    | 35,927     | 201      |
| walleye pollock     | Biomass    | 3,673     | 5,632      | 53       |
|                     | Population | 6,313,819 | 9,585,593  | 52       |
| yellowfin sole      | Biomass    | 1,489     | 1,618      | 9        |
|                     | Population | 5,553,541 | 7,467,100  | 34       |

# Aleutian Islands Bottom Trawl Survey

- 2026 AI survey completed 373 stations of 447 attempted, 89,510 lengths, 6,060 otoliths
- New hardware/software used for effort-data collection
- Bottom temp average, surface cool, WAI warm w/ localized hypoxia
- Flatfish below mean, rockfish above mean, gadids mixed, sablefish above, skate low biomass

## Catch composition

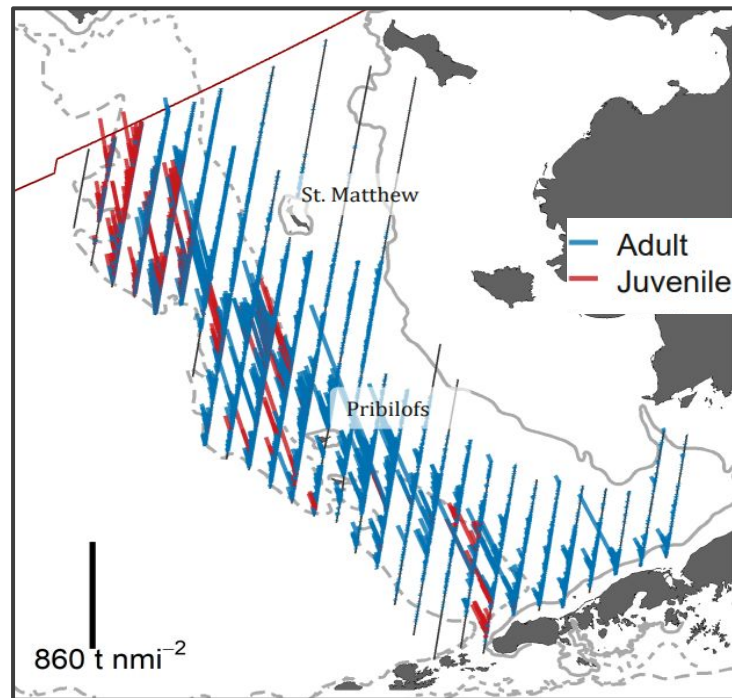


Thanks to Susanne McDermott

# Summer Acoustic Survey & AVO Index

- 2026 ATS preliminary estimate: ~3.6 million t and 13 billion pollock
- More juvenile pollock than recent survey years, age-2 largest since 2012 year class
- AVO and ATS spatial patterns were similar in 2026
- Team recognized major MACE/GAP effort to produce rapid survey products

Thanks to Abigail McCarthy & Nathan Lauffenburger



# Harvest Projections



| Stock                    | Lead Author      | ABC     | OFL     | Assessment Schedule                  |
|--------------------------|------------------|---------|---------|--------------------------------------|
| Northern Rock Sole       | Carey McGilliard | 152,865 | 160,588 | Last: 2024, Next: 2027               |
| Aleutian Islands Pollock | Steve Barbeaux   | 48,763  | 59,090  | Last: 2024, Next: 2027               |
| Kamchatka Flounder       | Meaghan Bryan    | 6,770   | 7,988   | Last: 2024, Next: 2027               |
| Northern Rockfish        | Paul Spencer     | 17,784  | 21,739  | Last: 2023, Next: 2027               |
| Alaska Plaice            | Lee Cronin-Fine  | 33,021  | 39,724  | Last: 2024, Next: 2028               |
| Arrowtooth Flounder      | Kalei Shotwell   | 83,787  | 98,654  | Last: 2022, Next: 2027, Rceattle/ESP |
| Flathead Sole            | Lee Cronin-Fine  | 108,596 | 89,655  | Last: 2024, Next: 2028               |

- Plan Team supported author's ABC, OFL, and BRDs for all seven stocks
- Plan Team suggestions on options to improve readability for future reports

Thanks to Melissa Haltuch and Authors



# Bogoslof Pollock



- Operational update assessment, Tier 5 stock with no new survey data
- Authors provided overview of ongoing research on size-based spawn timing and survey timing
- Team discussed potential for changes in sex-ratio due to size-based spawn timing
- Team agreed with author's proposed Tier 5 model and harvest recommendations

Thanks to Jim Ianelli



# EBS Pollock: Proposed models



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

Thanks to Jim Ianelli



# EBS Pollock



- Discussion:

- Retrospective pattern in all models, potentially linked to missing 2020 BTS, flexibility on age-1 BTS selectivity, ecosystem structure changes
- OSA residuals show some patterns indicating potential data-weighting, fit issues

- Recommendations:

- Agreed with author's proposed Model 23.0 (base) and Model 26.0 for November
- Evaluating alternative treatments of age-1 BTS selectivity, self-test on simulated datasets, BST index volatility, and ecosystem-related causes of retrospective pattern for Model 23.0 and 26.0
- Clearly documenting age-composition weighting and prioritizing further evaluation
- Continued development of EBS pollock ESP as resources allow



# Yellowfin Sole: Proposed models



- Assessment reviewed by CIE in June 2026 and focused on transition from ADMB to SS3, tier choice, treatment of growth and survey data, and environmental covariates used in survey catchability
- Authors proposed three models for November:
  - Model 25.0: updated SS3 base model
  - Model 25.0a: uses sample ISS for survey input sample size
  - Model 25.0b: uses EBS bottom temperature instead of survey start date as covariate on catchability

Thanks to Ingrid Spies and Meaghan Bryan



# Yellowfin Sole



- Discussion:
  - Potential to evaluate cold pool as covariate and continued consideration of using environmental covariates in survey and catchability components
  - Empirical weight-at-age and increase in older age weight in recent years, suggested future exploration of growth as function of temperature
- Recommendations:
  - Agreed with author's proposed Tier 3 Models 25.0, 25.0a, and 25.0b



# Greenland Turbot: Proposed models



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

Thanks to Meaghan Bryan



# Greenland Turbot



- Discussion:

- Persistent conflict between survey indices and length compositions and continued retrospective patterns
- Suggested sensitivity runs of recruitment autocorrelation, later start year, and tier 4 applications for future investigations
- Importance of additional age information from slope survey and fishery collections, also potentially including otolith collection on the longline survey

- Recommendations:

- Agreed with author's proposed Tier 3 Models 25.0, 25.3a, and 25.4a for November and include updated Tier 5 REMA as potential interim advice
- Clearly document how AFSC longline survey used in Tier 3 and 5 approaches, include information needed to improve the assessment in research / data-gaps section



# EBS Pacific Cod: Proposed Models



- Focused on model explorations regarding sensitivity to the plus group and a split-sex analysis
- Reduction of plus group to 14+ results in fewer parameters, small improvements to model fit, little change in results from base model (20+)
- Split-sex needed to use design-based age compositions, mixed results for model fit, potential modeling artifacts requires more exploration
- Authors proposed Model 26.1: updated data and 14+ group

Thanks to Steve Barbeaux



# EBS Pacific Cod



- Discussion:
  - Appropriateness age-14+ group, extending beyond max age to represent unfished population, and interaction with sex-specific differences in growth
  - Exploration of age-varying natural mortality, interaction with selectivity, and use of tagged fish and associated genetic information to evaluate sex-specific movement
- Recommendations:
  - Team agreed with author's proposed Models 26.1 and requested 24.1 (base) for November review, noting the two models are likely to be very similar
  - Continued exploration of split-sex models and alternative natural mortality parameterizations for future model development



# Proposed Specifications Team Recommended

- Team recommended rollover of 2026 specifications for 2027–2028 proposed specifications

Table 1. Plan Team OFL, ABC, and BRD recommendations (metric tons) for BSAI Groundfish Proposed Harvest Specifications for 2027/ 2028

| Species             | Area     | 2026      |           |           | Catch as of 9/8/2026 | Plan Team Recommended 2027/2028 |           |        |
|---------------------|----------|-----------|-----------|-----------|----------------------|---------------------------------|-----------|--------|
|                     |          | OFL       | ABC       | TAC       |                      | OFL                             | ABC       | BRD    |
| Pollock             | EBS      | 2,496,000 | 2,036,000 | 1,375,000 | 1,125,707            | 2,496,000                       | 2,036,000 |        |
|                     | AI       | 56,231    | 46,437    | 19,000    | 2,478                | 56,231                          | 46,437    |        |
|                     | Bogoslof | 77,354    | 58,015    | 250       | 165                  | 77,354                          | 58,015    |        |
|                     | BS       | 169,243   | 141,520   | 123,077   | 111,824              | 169,243                         | 141,520   |        |
| Pacific cod         | AI       | 16,273    | 12,973    | 8,951     | 6,084                | 16,273                          | 12,973    |        |
|                     | BSAI/GOA | 57,797    | 47,008    |           | 19,226               | 57,797                          | 47,008    |        |
| Sablefish           | BS       |           |           | 8,996     | 2,723 NA             |                                 |           | 13,037 |
|                     | AI       |           |           | 7,440     | 831 NA               |                                 |           | 11,421 |
|                     | BSAI     | 305,039   | 267,639   | 145,000   | 67,518               | 305,039                         | 267,639   |        |
| Yellowfin sole      | BSAI     | 2,059     | 1,328     | 1,328     | 178                  | 2,059                           | 1,328     |        |
|                     | BS       |           |           | 1,120     | 121 NA               |                                 |           | 1,120  |
| Greenland turbot    | AI       |           |           | 208       | 57 NA                |                                 |           | 208    |
| Arrowtooth flounder | BSAI     | 102,472   | 87,035    | 14,000    | 4,820                | 102,472                         | 87,035    |        |
| Kamchatka flounder  | BSAI     | 7,790     | 6,606     | 6,606     | 1,953                | 7,790                           | 6,606     |        |
| Northern rock sole  | BSAI     | 166,220   | 158,225   | 75,000    | 35,917               | 166,220                         | 158,225   |        |
| Flathead sole       | BSAI     | 106,283   | 87,700    | 36,000    | 16,216               | 106,283                         | 87,700    |        |
| Alaska plaice       | BSAI     | 33,965    | 28,230    | 15,682    | 4,143                | 33,965                          | 28,230    |        |
| Other flatfish      | BSAI     | 26,083    | 19,562    | 4,500     | 3,754                | 26,083                          | 19,562    |        |

|                     |         |           |           |           |           |           |           |        |
|---------------------|---------|-----------|-----------|-----------|-----------|-----------|-----------|--------|
|                     | BSAI    | 43,084    | 36,578    | 33,490    | 18,945    | 43,084    | 36,578    |        |
|                     | BS      |           |           | 9,905     | 3,070 NA  |           |           | 9,905  |
|                     | EAI     |           |           | 6,144     | 3,366 NA  |           |           | 6,144  |
|                     | CAI     |           |           | 5,441     | 4,050 NA  |           |           | 5,441  |
| Pacific Ocean perch | WAI     |           |           | 12,000    | 8,459 NA  |           |           | 16,058 |
| Northern rockfish   | BSAI    | 22,284    | 18,232    | 12,000    | 8,389     | 22,284    | 18,232    |        |
|                     | BSAI    | 902       | 766       | 766       | 439       | 902       | 766       |        |
|                     | EBS/EAI |           |           | 441       | 101 NA    |           |           | 441    |
| Blackspotted/Roughy | CAI/WAI |           |           | 325       | 338 NA    |           |           | 325    |
| Shortraker rockfish | BSAI    | 631       | 473       | 473       | 50        | 631       | 473       |        |
|                     | BSAI    | 1,406     | 1,054     | 1,054     | 527       | 1,406     | 1,054     |        |
|                     | BS      |           | 639       | 639       | 160 NA    |           |           | 639    |
| Other rockfish      | AI      |           | 415       | 415       | 367 NA    |           |           | 415    |
|                     | BSAI    | 107,889   | 92,361    | 82,941    | 59,986    | 107,889   | 92,361    |        |
|                     | EAI/BS  |           |           | 41,731    | 24,297 NA |           |           | 41,731 |
|                     | CAI     |           |           | 23,716    | 19,991 NA |           |           | 23,716 |
| Atka mackerel       | WAI     |           |           | 17,494    | 15,698 NA |           |           | 26,914 |
| Skates              | BSAI    | 43,285    | 35,833    | 27,646    | 14,312    | 43,285    | 35,833    |        |
| Sharks              | BSAI    | 689       | 450       | 400       | 157       | 689       | 450       |        |
| Octopuses           | BSAI    | 6,080     | 4,560     | 400       | 150       | 6,080     | 4,560     |        |
| Total               | BSAI    | 3,849,059 | 3,188,585 | 2,000,000 | 1,487,705 | 3,849,059 | 3,188,585 |        |

# Team General Discussions

- Cross-cutting issues: Age and Growth program capacity, maintaining Team expertise, improved CIE communication
- Need earlier communication on major assessments and new methods to the Team
- Team supported a centralized information resource webpage which was initiated during the meeting



# BSAI Documentation Summary

| Assessment                                   | BSAI stocks for 2025 (November)                                                                                                                                                 |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operational Full                             | EBS Pollock, EBS Pacific cod, BSAI Yellowfin Sole, BSAI Greenland turbot, BSAI skates                                                                                           |
| Operational Update                           | AI Pacific cod, BSAI Pacific ocean perch, BSAI roughey & blackspotted rockfish, BSAI shortraker rockfish, BSAI other rockfish, BSAI Atka mackerel, Bogoslof pollock (September) |
| Harvest Projection<br>(reviewed in Sept/Oct) | AI pollock, BSAI northern rock sole, BSAI Kamchatka flounder, BSAI arrowtooth flounder, BSAI northern rockfish, BSAI flathead sole, BSAI Alaska plaice                          |
| Catch, ESPs, and<br>Ecosystem Reports        | BSAI other flatfish, BSAI Sharks, BSAI Octopus, EBS Pacific cod ESP (update), EBS Pollock ESP (draft), BSAI Greenland turbot ESP (draft), BSAI/GOA Forage                       |

# Thank You!



## BSAI Plan Team Contacts:

[Steve.Barbeaux@noaa.gov](mailto:Steve.Barbeaux@noaa.gov)

[Kalei.Shotwell@noaa.gov](mailto:Kalei.Shotwell@noaa.gov)

[Diana.Stram@noaa.gov](mailto:Diana.Stram@noaa.gov)

[Cindy.Tribuzio@noaa.gov](mailto:Cindy.Tribuzio@noaa.gov)