

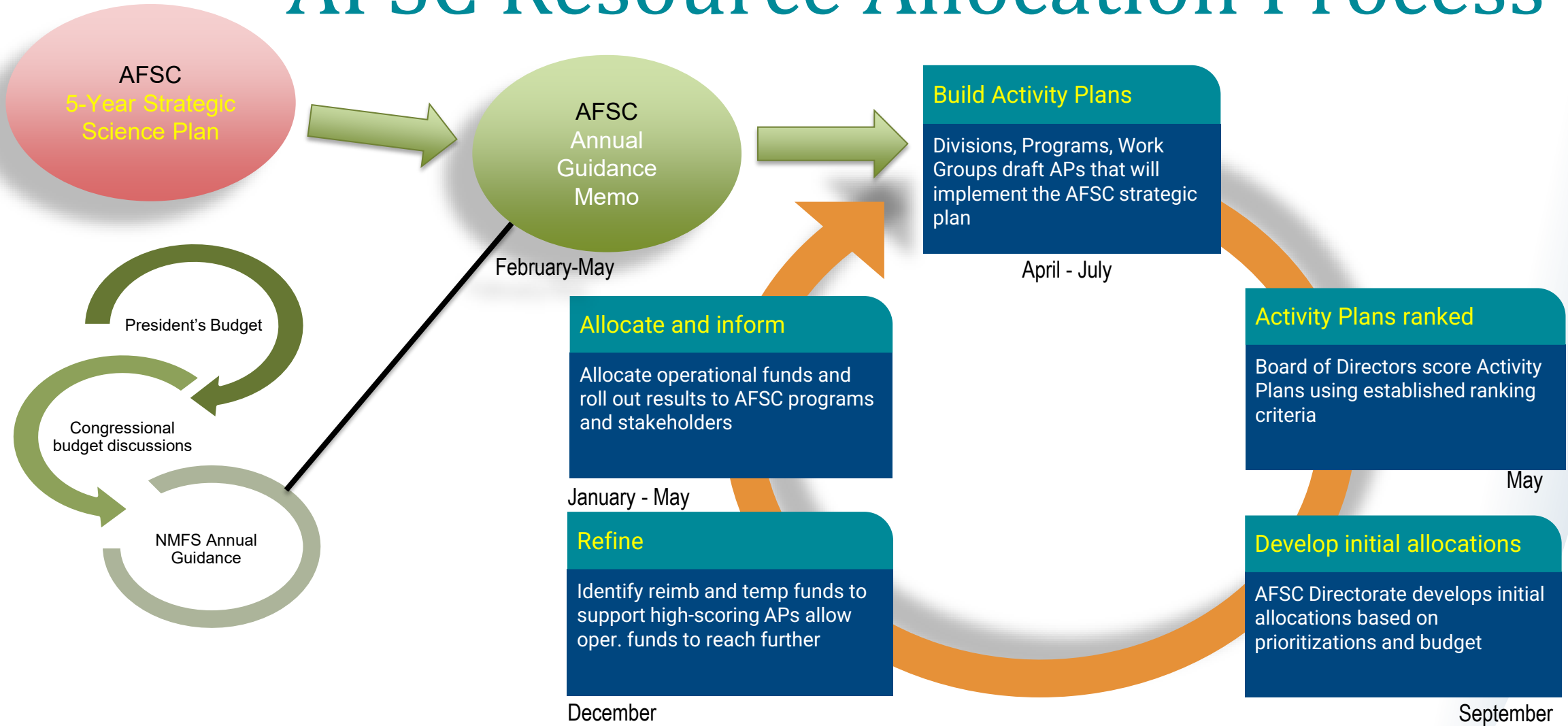


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Alaska Fisheries
Science Center

B4 State of the Center Report

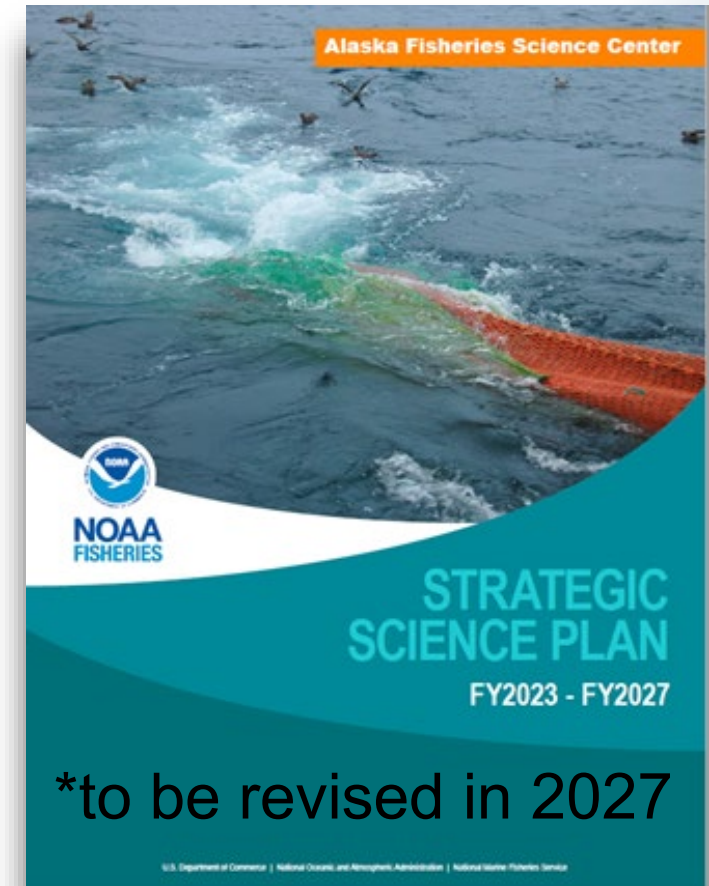
*Robert Foy, Alaska Fisheries Science Center Director
North Pacific Fishery Management Council Meeting
June 2026*

AFSC Resource Allocation Process



AFSC Strategic Science Plan

- Aligned to advance NOAA mission
 - **Goal 1:** Monitor and assess fish, crab, and marine mammal populations, fisheries and marine ecosystems.
 - **Goal 2:** Monitor and predict climate impacts on living marine resources.
 - **Goal 3:** Advance new initiatives and innovations.



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2026-27 AFSC Annual Guidance Memo (AGM)

- Research on **environmental/climate forcing** of ecosystems (e.g., salmon survival, heat wave response) to address critical uncertainties for management.
- Research supporting the transition from historical fishery-independent index tools to **new statistical survey designs** (e.g., systematic to stratified random), **gear** (e.g., new net, UxS), or **multispecies/multipurpose surveys**.
- Analyzing and using **fishery-dependent data** (e.g., CPUE) in stock assessments and/or Ecosystem and Socioeconomic Profiles (ESPs) as an early warning tool for population change.
- Research addressing limitations and **gaps in annual fishery-dependent data** deployment plans to ensure adequate collections for stock assessment and uncertainty characterization for risk tables.



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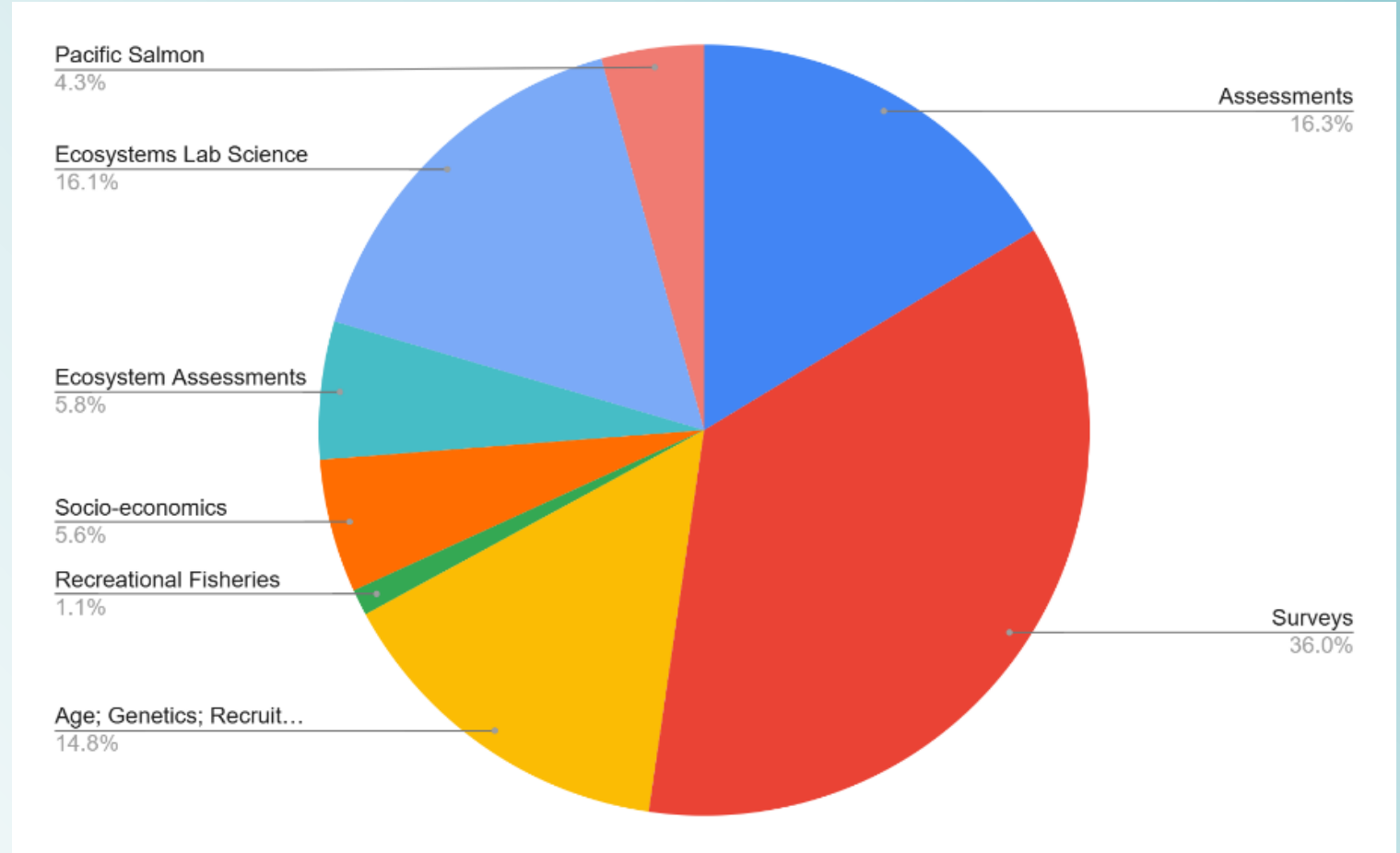
AFSC Priority Planning - update

- Priority planning to meet intent of Executive Orders, staff losses, and resource expectations.
 - Vision: Science will support **stability** in fisheries in a variable environment.
 - Goal: Develop a dynamic framework (scalable to available resources) to prioritize science (survey and stock assessments and ecosystem) **to serve MSA-required management.**
 - Prioritize efforts on **EBFM approach** to economically-important fisheries. This includes monitoring and assessing the strongest climate and species interactions that force stock production and stability.

AFSC Priority Planning - update

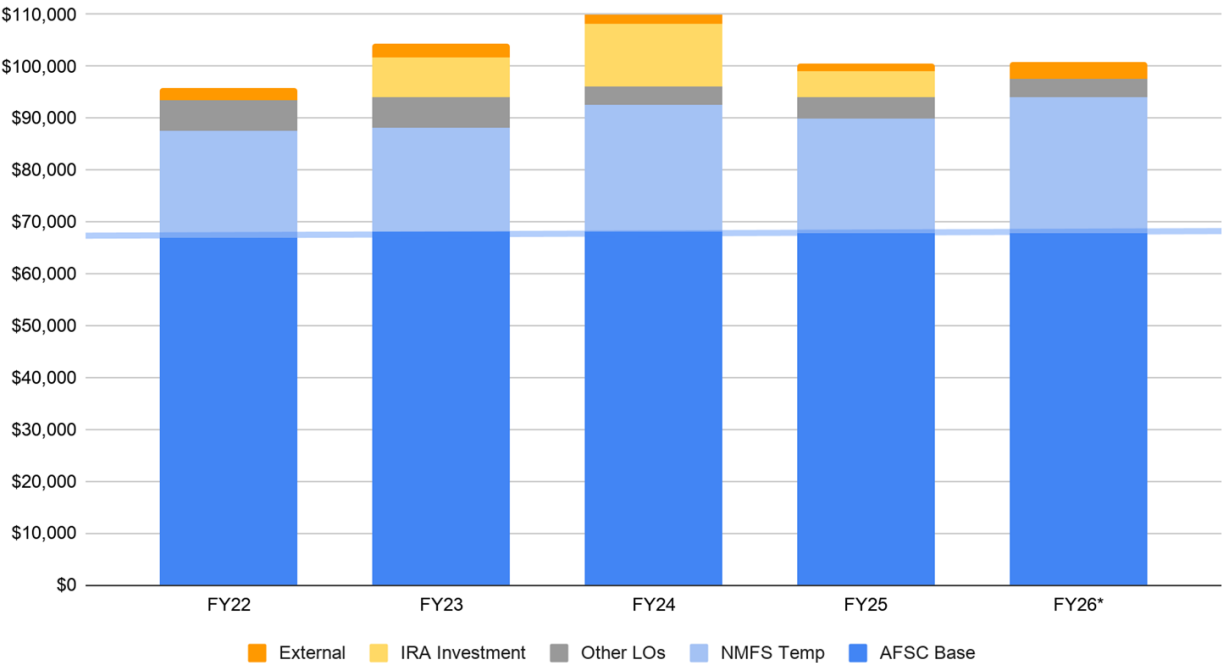
● AFSC Areas of Focus

- **Survey and assessment**
 - groundfish
 - salmon
- **Ecosystem science**
- **Marine mammals**



2026 Budget Update

AFSC Funding Profile (FY22-FY26)



- FY26* result in a “flat” funding profile
- Resources available support our highest priority science, including surveys
- NOAA and NMFS priorities supported survey modernization, UxS, and ‘Omics
- FY25 staffing reductions increased funds available for operational priorities
- Planning on “flat” funding for FY27; will scenario plan for alternative budget scenarios (President’s Budget Request; Congressional Markups)

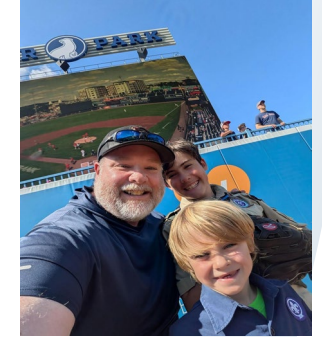


2026 Staffing Updates

Fishery Monitoring and Analysis Director: Dr. Sean Lucey

Sean brings extensive experience in fisheries science, policy, and leadership to this role, much of which he gained during his nearly 20 years with the Northeast Fisheries Science Center. His career is defined by a commitment to advancing ecosystem-based fisheries management and fostering collaboration among government, industry, and academic stakeholders. Sean has authored numerous peer-reviewed publications on topics such as fishery management strategies, open data science, and climate vulnerability.

Sean earned a Ph.D. in Marine Science and Technology from the University of Massachusetts Dartmouth. He also holds an MS in Wildlife and Fisheries Conservation from the University of Massachusetts Amherst and a BS in Biology from The College of New Jersey.

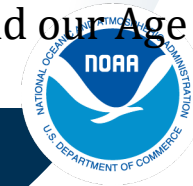


Fishery-Independent Data Collections

Dr. Jessica (Jessie) Beck is re-joining the AFSC in mid-June as a fishery biologist to bolster our fishery survey and ecosystem research. Dr. Beck will focus on groundfish surveys, ecology, and population dynamics.

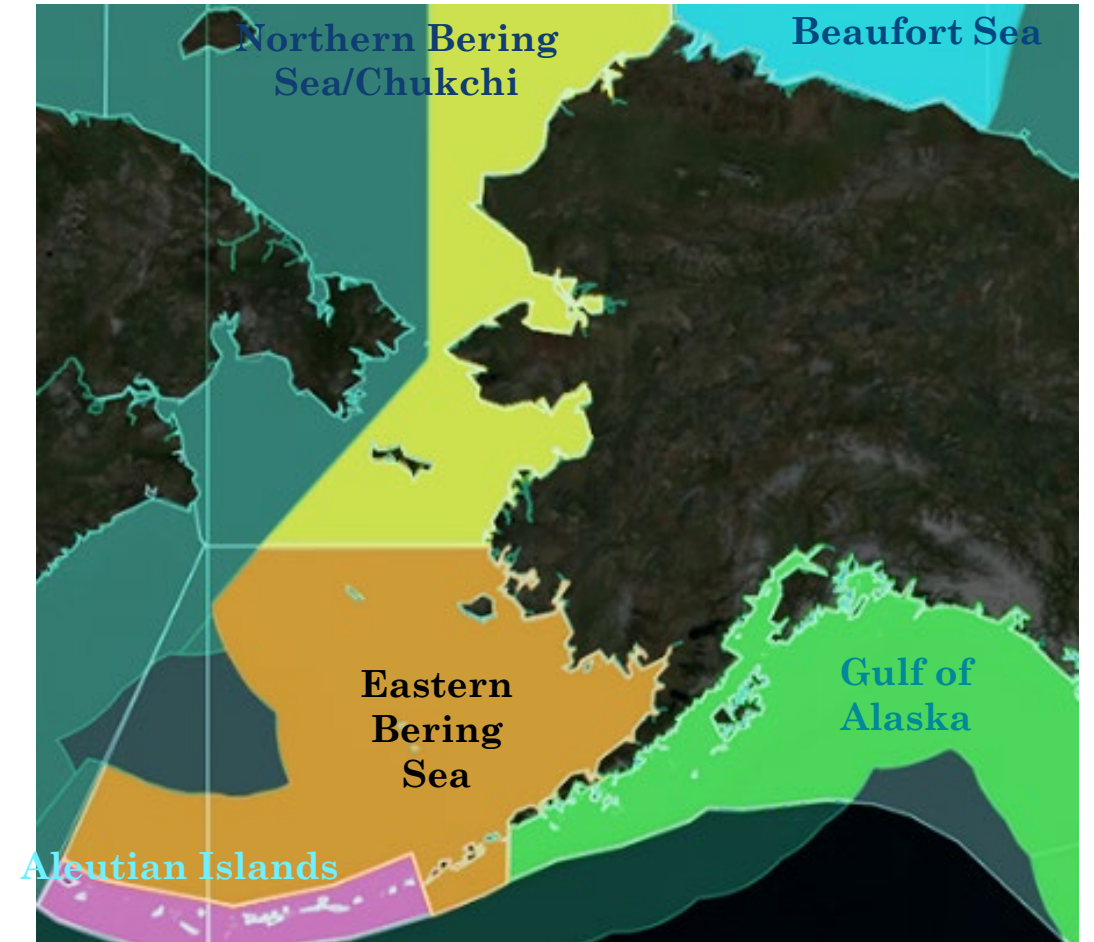
Coming Soon

The AFSC is hiring an additional **fishery biologist for groundfish surveys**; a Supervisory **Industrial Economist** to lead our Economics and Social Science Research program; a Supervisory **Research Fishery Biologist** to lead our Age and Growth program; and a **bioinformatics** specialist to support our Genetics program.



2026 Research Plans

- **Planning and completing scheduled mission-critical surveys**
- **Continuing Survey Modernization efforts**
- **Advancing other mission-critical research**
 - **UxS survey augmentation**
 - **'Omics advances for stock composition (e.g. eDNA)**
 - **Integrating advanced technology into operational assessments (e.g. FT-NIRS for pollock ages)**
 - **Optical tools**
 - **Active acoustics**
 - **Expand cloud and AI**



● **Alaska EEZ = 1.5 million nm²**

● **5 Large Marine Ecosystems**

AFSC Fisheries Surveys Prioritized (1-11)

Priority	LME	Platform	Survey	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
1	Bering Sea	Charter	GAP-SAP Eastern Bering Sea Bottom Trawl Summer	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	RED	GREEN	GREEN	GREEN	YELLOW	GREEN	GREEN
2	Gulf of Alaska	Charter	GAP Gulf of Alaska Bottom Trawl Summer	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE
3	Aleutian Islands	Charter	GAP Aleutian Islands Bottom Trawl Summer	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	RED	WHITE	GREEN	WHITE	YELLOW	WHITE	GREEN
4	Gulf of Alaska	NOAA Ship	MACE Shelikof Strait Pollock Acoustic-Trawl Winter	GREEN	RED	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN
5	Bering Sea	NOAA Ship	MACE Eastern Bering Sea Pollock Acoustic-Trawl Summer	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	YELLOW	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN
6	Gulf of Alaska	Charter	MESA Gulf of Alaska & Eastern Bering Sea & Aleutian Islands Longline Summer	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	YELLOW	GREEN	GREEN	GREEN	RED	GREEN	X
7	Bering Sea	Charter	MESA Gulf of Alaska & Eastern Bering Sea & Aleutian Islands Longline Summer	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	X	GREEN
8	Aleutian Islands	Charter	MESA Gulf of Alaska & Eastern Bering Sea & Aleutian Islands Longline Summer	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	YELLOW	WHITE	GREEN	WHITE	RED	WHITE	GREEN
9	Bering Sea	Charter	GAP-SAP Northern Bering Sea Bottom Trawl Summer	GREEN	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	GREEN	WHITE	GREEN	RED	GREEN	YELLOW	GREEN	X	GREEN	GREEN
10	Bering Sea	Charter	EMA Northern Bering Sea Ecosystem Surface Trawl Fall	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	RED	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN
11	Gulf of Alaska	NOAA Ship	MACE Shumagin/Sanak Pollock Acoustic-Trawl Winter	GREEN	RED	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	RED	RED	RED	GREEN	GREEN	RED	GREEN

GREEN=planned/completed **YELLOW=Partial** **RED=Not Completed** **WHITE=not planned; x no longer planned**

AFSC Fisheries Surveys Prioritized (12-24)

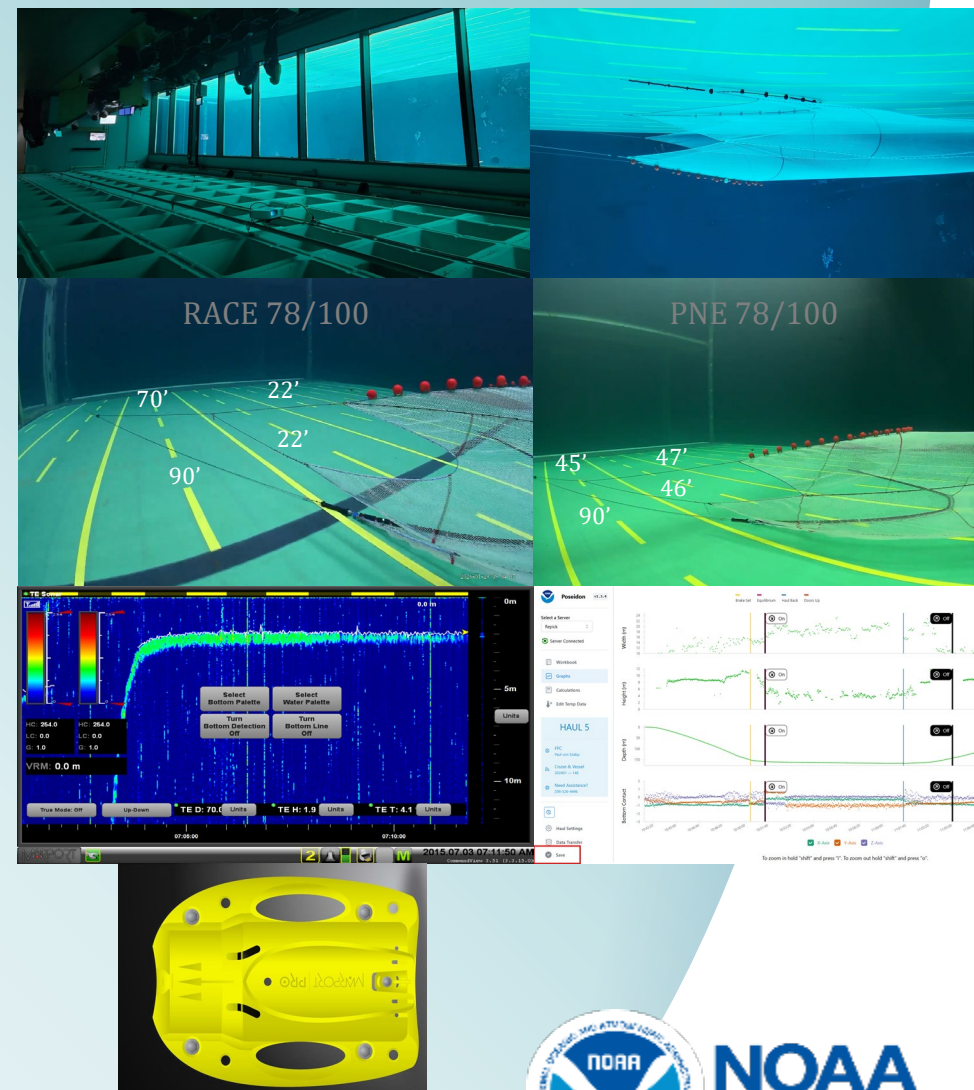
Priority	LME	Platform	Survey	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
12	Bering Sea	NOAA Ship	MACE Bogoslof Pollock Acoustic-Trawl Winter			GREEN		RED		GREEN		GREEN		GREEN		RED		GREEN		X
13	Bering Sea	NOAA Ship	EMA Eastern Bering Sea Juvenile Fish Fall		GREEN	GREEN		GREEN		GREEN		GREEN		RED		YELLOW		YELLOW		GREEN
14	Gulf of Alaska	NOAA Ship	EcoFOCI Gulf of Alaska Ichthyoplankton Spring	GREEN	GREEN		GREEN		GREEN		GREEN		GREEN		GREEN		YELLOW		GREEN	
15	Bering Sea	NOAA Ship	EcoFOCI Eastern Bering Sea Ichthyoplankton Spring		GREEN	GREEN		GREEN		GREEN		GREEN		RED		RED		GREEN		RED
16	Bering Sea	NOAA Ship	EcoFOCI Eastern Bering Sea & Gulf of Alaska Moorings_Spring	GREEN	GREEN	GREEN		GREEN		GREEN		GREEN		RED		GREEN	GREEN	YELLOW		GREEN
17	Bering Sea	NOAA Ship	EcoFOCI Eastern Bering Sea & Gulf of Alaska Moorings_Fall		GREEN				GREEN	GREEN		GREEN			GREEN	GREEN	YELLOW		GREEN	GREEN
18	Gulf of Alaska	State Ship	EMA Southeast Alaska Coastal Monitoring Summer	GREEN		GREEN	GREEN	GREEN		GREEN	RED	GREEN		YELLOW	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN
19	Gulf of Alaska	NOAA Ship	EcoFOCI Western Gulf of Alaska Juvenile Fish Fall		YELLOW		GREEN		GREEN		GREEN		GREEN		RED		YELLOW		RED	
20	Gulf of Alaska	Charter	RECA Prince William Sound Humpback Whale Abundance & Fecundity Index Fall	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	RED	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN
21	Gulf of Alaska	NOAA Ship	MACE Gulf of Alaska Pollock Acoustic-Trawl Summer		YELLOW		GREEN		GREEN		GREEN		GREEN		GREEN		GREEN		X	
22	Gulf of Alaska	Charter	GAP Gulf of Alaska Bottom Trawl Slope		X		X		X		X		X		X		X		X	
23	Bering Sea	NOAA Ship	GAP-SAP Eastern Bering Sea Slope Bottom Trawl Summer	GREEN		GREEN		RED		GREEN		RED		X		X		X		X
24	Aleutian Islands	NOAA Ship	EcoFOCI Alaska Movement of Key Fishes Summer	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN		GREEN	X	X	X	X	X	X	X

GREEN=planned/completed **YELLOW**=Partial **RED**=Not Completed **WHITE**=not planned; x no longer planned

Survey Modernization Efforts in 2026

Bottom Trawl Surveys: Bering Sea Bottom Trawl Survey

- Completed Flume Tank Studies.
 - Based on results and workshop consultation with stakeholders, two designs will be field tested: RACE 78/100 and PNE (Poly Nor'easter) 78/100
- Field testing scheduled to begin this summer in Bering Sea with emphasis on the RACE 78/100 prototype
- Replaced all net mensuration sensors with modern units
- Modernized at-sea computers and data acquisition software
 - Increased security, near-real time data checking/validation, and daily uploads to cloud database.
- Funding secured for Post-Docs to aid with modeling of survey design options and testing



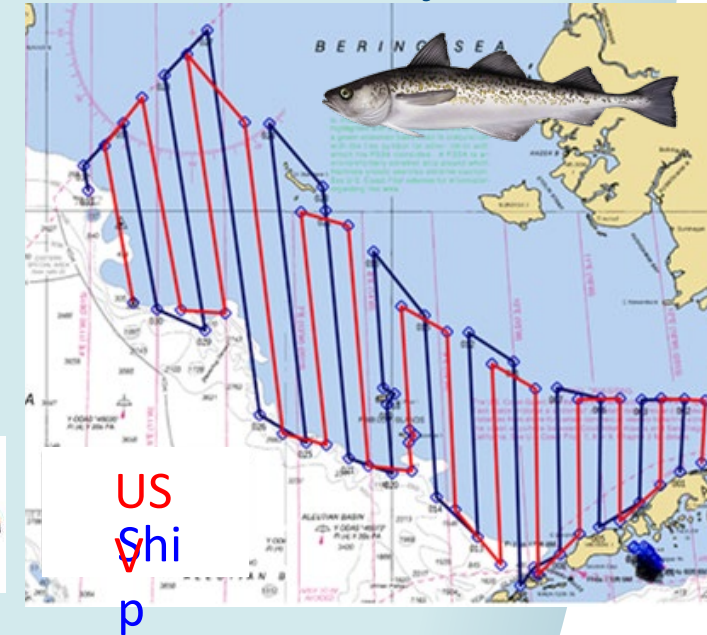
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Survey Modernization Efforts in 2026

Acoustic-Trawl Surveys: USVs as 'force multipliers' for acoustic-trawl surveys

Tandem survey concept

- Same methods as current ship-based surveys
- Ship and USV coordinate work on alternate transects, ship trawls as needed
- USV and ship data combined to estimate abundance
- Ship and USV operate outside line of sight



Benefits

- Concurrent acoustic and trawl data
- Increased survey efficiency
 - Less ship time
 - More area
 - Additional sampling

Survey Modernization Efforts in 2026

Cross-Center Efforts to Improve Efficiencies and Respond to Changing Ocean Conditions

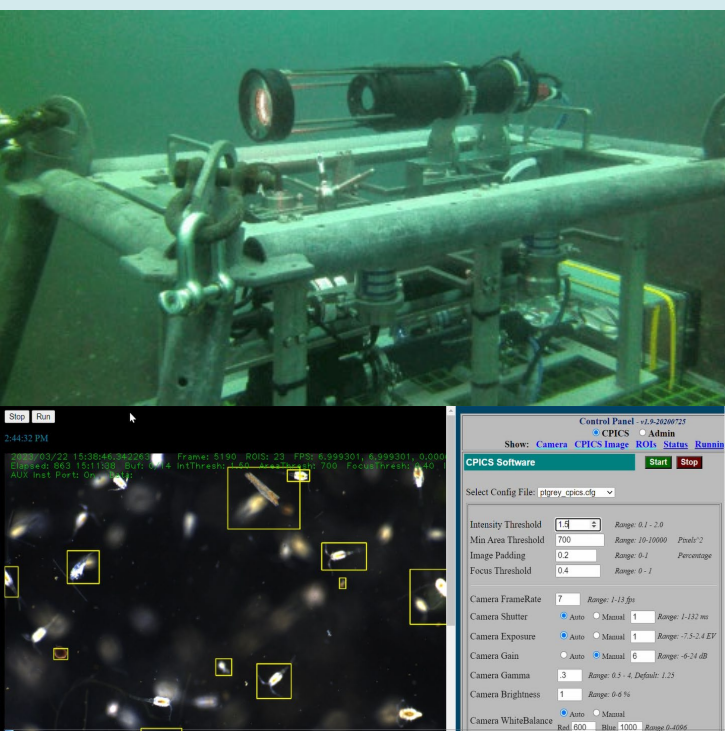
Echosounder Moorings: 1+ year deployment duration



CatCam - Semi-autonomous towed stereo camera system for surveying near-bottom fish and benthic communities in rocky habitats.



CPICS autonomous plankton imager with Machine Learning

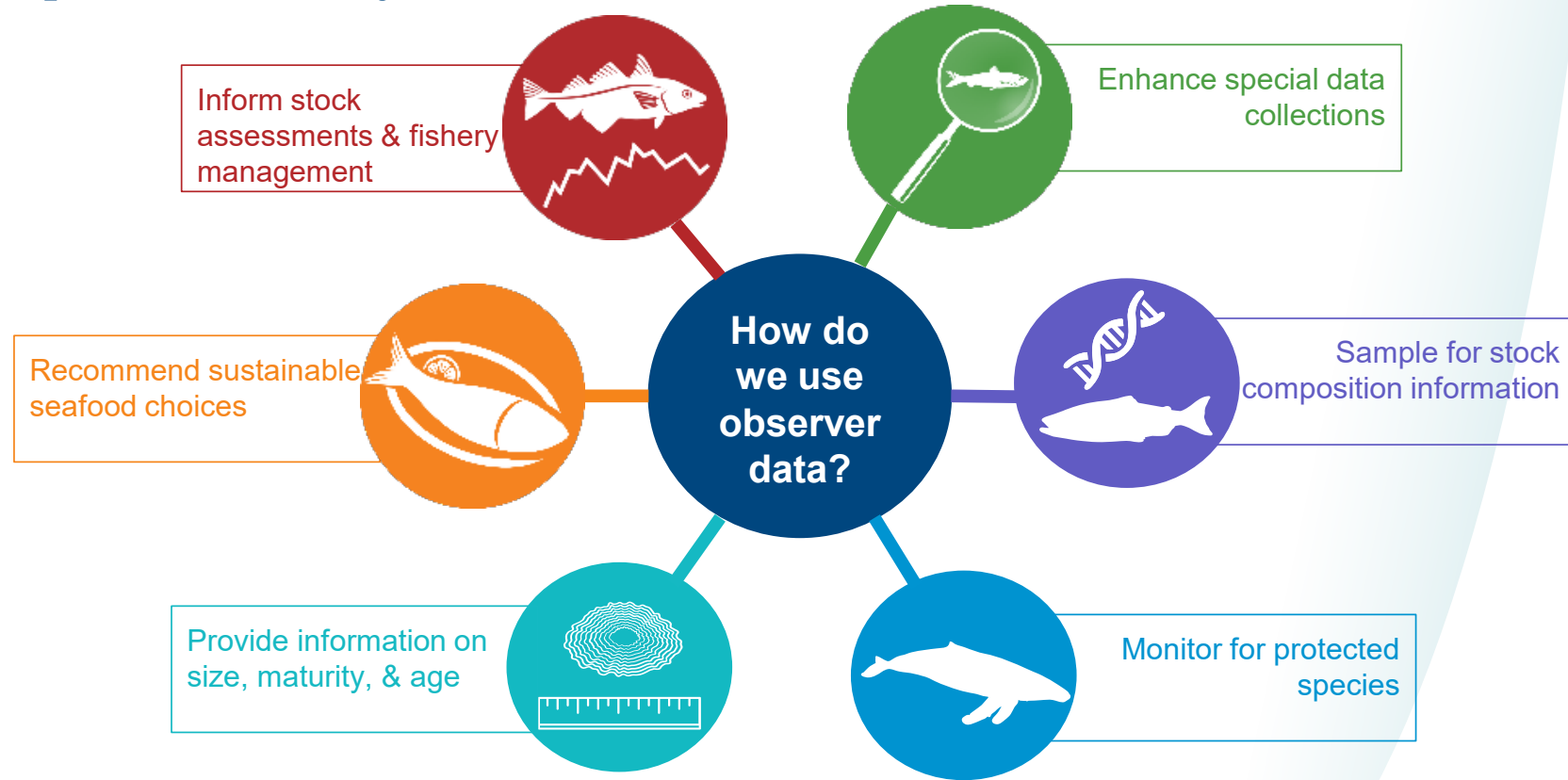


Planned Research in 2026

Fishery-Dependent Data Collection

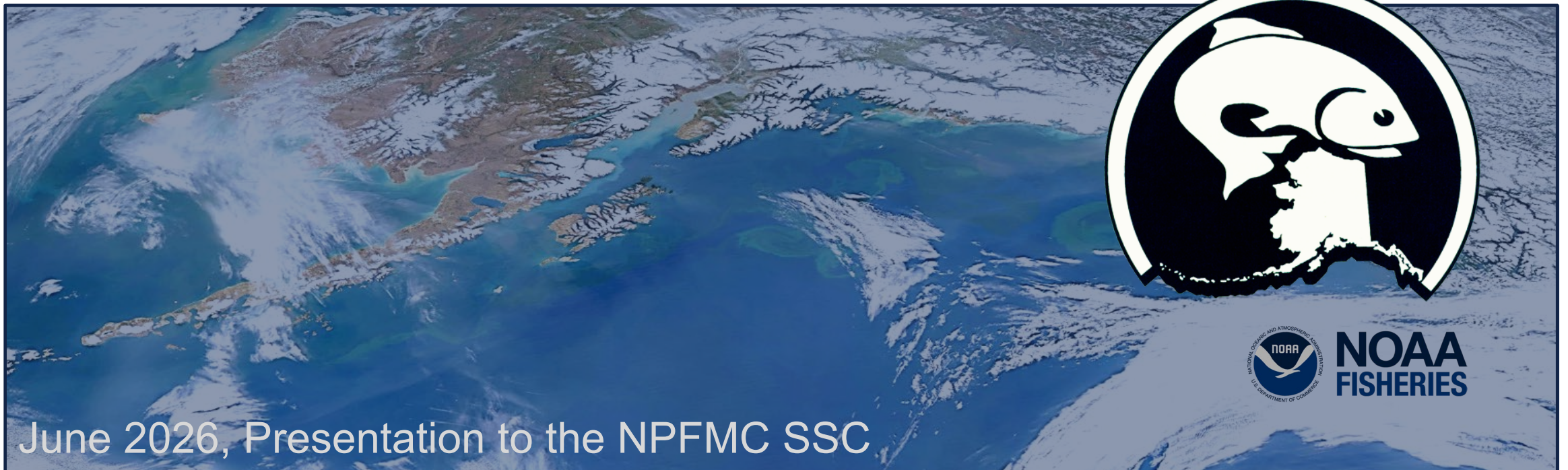
Observer & Electronic Monitoring (EM) data provide unique & independent information collected at sea & at shoreside processors critical to the effective management of our marine resources. Data **support sustainable fisheries & protected species recovery.**

- June 2026 CIE Review on Partial Coverage Observer Deployment Model and Electronic Monitoring (EM)



GOA BOTTOM TRAWL SURVEY: EVALUATION OF 2025 RESULTS

N. LAMAN, P. HULSON, Z. OYAFUSO, S. ROHAN, M. SIPLE, M. HALTUCH, C. LUNSFORD, AND S. KOTWICKI

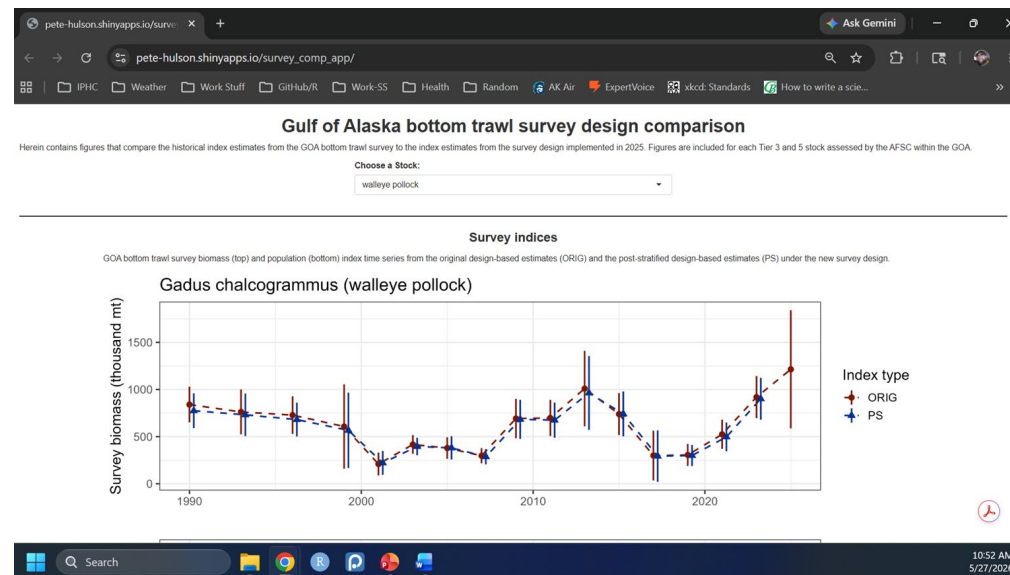


June 2026, Presentation to the NPFMC SSC

DATA – AFSC BOTTOM TRAWL SURVEY

*Was there an influence of the GOA bottom trawl survey restratification on 2025 results? **NO***

- The results from the 2025 survey continue trends we have recently observed and estimates that are within historical ranges



Overview of ESSR Program

The AFSC Economic and Social Science Research Program produces rigorous, policy-relevant analysis to support sustainable fisheries management across Alaska and the North Pacific.

<p>Annual Reporting</p> <ul style="list-style-type: none"> Groundfish Econ SAFE Crab Econ SAFE ACEPO Alaska Snapshot 	<p>Decision Support Tools</p> <ul style="list-style-type: none"> MRSAM model Community Landings DB Social & economic indicators 	<p>Databases</p> <ul style="list-style-type: none"> ACE Dashboard Catch shares performance NOAA Voices Archives
<p>Purpose</p> <p>Track AK fishery & fishing community performance</p>	<p>Purpose</p> <p>Provide analytical support to resource managers</p>	<p>Purpose</p> <p>Data transparency and support analysts workflow</p>
<p>Audience</p> <ul style="list-style-type: none"> NPFMC AKRO Analysts General Public 	<p>Audience</p> <ul style="list-style-type: none"> NPFMC AKRO Fishing Communities 	<p>Audience</p> <ul style="list-style-type: none"> Analysts AKRO Plan Teams
<p>Specific Uses Cases</p> <ul style="list-style-type: none"> Harvest specs RIR Impact analyses Council analytical docs SIA 	<p>Specific Uses Cases</p> <ul style="list-style-type: none"> Council Climate Plan Prioritization Analyses Snapshot Forecast landings 	<p>Specific Uses Cases</p> <ul style="list-style-type: none"> National and regional level monitoring Research and analytical integration

	Groundfish SAFE
	Landings volume, fleet participation, wholesale production volume
	Ex-vessel pricing and value
	Wholesale pricing and value
	Amendment 80 chapter (EDR reporting)
	CrabSAFE
	Landings volume, fleet participation
	Wholesale production volume
	Ex-vessel pricing
	Wholesale pricing and value
	Employment, income, costs, quota and lease activity, net earnings

ACEPO Data Sources	
	Community participation indices in groundfish and crab
	Regional quotient based on landed volume
	Regional quotient based on landed value
	Community harvest / landing volume
	Community harvest / landing value
	Fleet participation / active vessel ownership
	Crab resident crew
	Crab resident QS holders
	Subsistence
	Population estimates (Alaska Department of Labor)
	Other demographic characteristics (ACS 5-year estimates)
	School enrollment
	Tax revenue

AFSC Preview of Ecosystem and Economic Conditions (May 26-28)

Goal: Exchange information on early physical, biological, and economic conditions to inform groundfish and crab stock assessment cycles.

- Groundfish Projections, In-Season Management, Industry Observations
- Economics
- Climate & Oceanography
- Primary Productivity & Lower Trophic Level Dynamics
- Upper Trophic Level Dynamics (Groundfish, Salmon, and Marine Mammals)
- Community Observations

Over 100 attendees; 51 presenters from NOAA, State agencies, Fishing Industry, Sea Grant, University of Alaska, University of Washington



Ecosystem Conditions

Eastern Bering Sea

- High sea ice in March/April, but ice was thin and retreated quickly. Ice constrained boats; affected fish biology.
- Greater than average 2° cold pool, smaller than average 0° cold pool expected in 2026.
- *El Niño events and strength of ALPS do not correlate with sea ice extent.*

Aleutian Islands

- Remains largely in MHW since 2014. Warming influenced but not driven by El Niño events

Gulf of Alaska

- Cooler and productive winter/spring ecosystem 2026; reprieve from warm 2025
- Expecting to see El Niño (warming) in fall 2026/winter 2027; ongoing coastwide monitoring

Economic Conditions

- Industry concerns: increased fuel prices / high operational costs, impacts to market prices, uncertainty in regulations (e.g., EU catch certificates)
- Universal concern over increased fuel prices across community participants



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Thank You!

