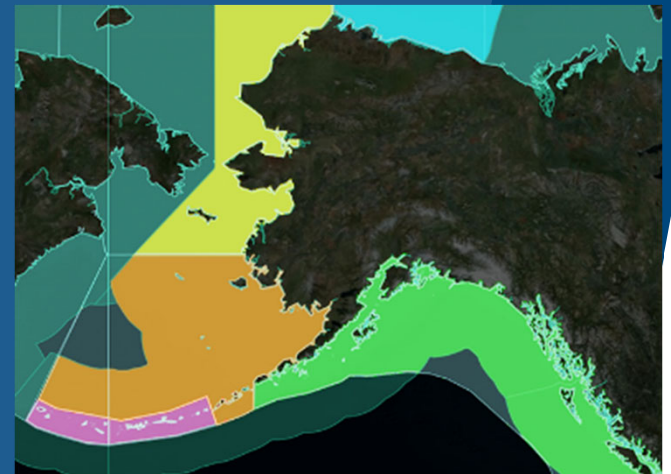


Alaska Fisheries Science Center Survey update

Robert Foy
AFSC Research and Science Director

Presentation for North Pacific Fishery Management Council
February 8, 2024



Overview

- 2024 Survey update
- Inflation Reduction Act update
- Survey Modernization Effort update



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2024 survey status update




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LME	Platform	Spp Group	Survey	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Aleutian Islands	Charter	Fish	GAP Aleutian Islands Bottom Trawl Summer															
	Charter	Fish	MESA GOA & Eastern Bering Sea & Aleutian Islands Longline Summer															
	NOAA Ship	Ecosystem	EcoFOCI Alaska Movement of Key Fishes Summer											X	X	X	X	X

- no planned DAS
- All went as planned
- cancelled planned DAS
- X no longer able to resource



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Inflation Reduction Act

<https://www.noaa.gov/inflation-reduction-act>

The Inflation Reduction Act (“IRA”, [HR 5376, PL 117-169](#)), signed August 16, 2022, provides a total of \$3.3B to NOAA. These funds have been internally divided into three “buckets,” as noted below, and allow NOAA to add increased focus to weather and climate resilience, coastal restoration and protection, supercomputing, facilities, and aircraft.

Bucket 1



Coastal Communities & Climate Resilience

Bucket 2



Forecasting, Weather, & Climate

Bucket 3



Facilities, Permitting, Aircraft, & More





• Climate Ready Fisheries

- Fishery Survey Charters
- Marine Mammal Survey Charters
- Survey Modernization
- Climate Ecosystem Fisheries Initiative
- Equity and Environmental Justice
- Strategic Initiatives
 - UxS
 - Omics
 - Remote Sensing
 - Optical
 - Passive Acoustics
 - Social Science





• Arctic Research

- Additions to monitoring indices of co-managed marine mammal stocks relative to climate change in the Arctic.
- Support co-development of research and knowledge needs with academic, international, and Indigenous partners.
- Socio-economic studies conducted to better inform Arctic policy decisions
- Interns and students supporting partnerships to co-develop local and Indigenous knowledge



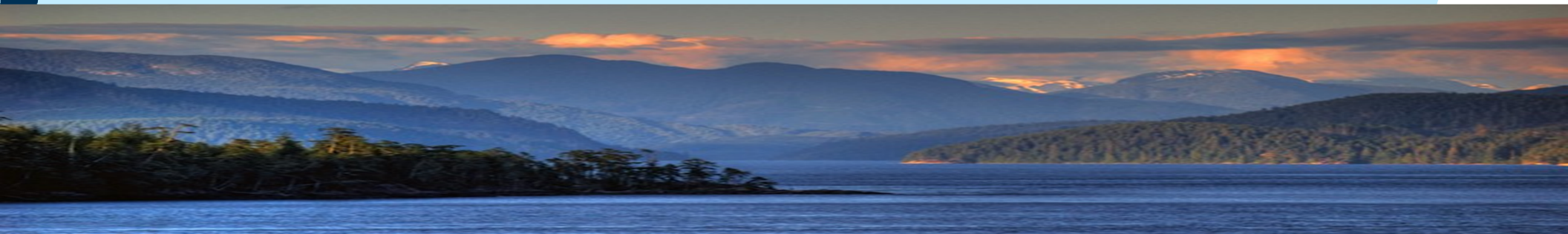
Survey Modernization



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Survey Modernization: Why Now?

- Foundation of current survey design dates back to the 1950s
- Better response to changes in environmental conditions and distribution of fish and crab stocks -- more nimble, adaptive survey approach
- New advanced survey technologies that improve efficiency and effectiveness (e.g., uncrewed vessel systems, eDNA, trawl sensors, camera systems)
- Obsolete survey gear material and design (cost, availability, supply chain)
- New methods (i.e., stratified random approach)
- New survey analysis tools (e.g., model-based methods, Artificial Intelligence)
- Need for new data types to support ecosystem-based fisheries management, Essential Fish Habitat designations, and climate forecasting



Stakeholder Input is Critical

Input welcome at all phases of modernization effort

- Overall design
- Sampling methodology
- Gear
- Exploring innovative collecting technologies (e.g., eDNA, acoustics, trawl sensors, camera systems, etc.)

Help with the development of a robust and nimble survey design that will meet our stock assessment and ecosystem monitoring needs for the next decade, or longer!



Stakeholder Input is Critical

October 2023 - current

- Initial discussions, Net Shed, current gear, and capabilities with multiple stakeholders and vessel captains
- Discussions on need for modernization, timing. (BSFRF, Alaska Seafood Cooperative, At-Sea Processors Assoc., Halibut Assoc of North America, NET Systems, LFS, DanTrawl, Swan Nets, Trident Seafoods, Ocean Peace Seafoods, US Seafoods, and America's Finest Seafoods)

Feb 7, 2024

- Trawl Doors, Bridle Rigging, Flume Tank Studies, Trawl (BSFRF, Trident, NETS, LFS, Ocean Peace, America's Finest, ++)

March, 2024

- Advance towards a new net design
- Specific date will be coordinated with the schedule of interested participants



Next Steps-Planned 2024

- Summer 2024
 - EBS Shelf and Slope work
- Flume tank studies (NFLD)
 - Scale models: comparative analysis of current trawl and new designs
 - Identify optimized trawl design
- New trawl door design
 - Lower cost, longer life span
 - Better materials
 - More stable, consistent trawl spread
 - Adaptable at sea for diverse studies (surface to seafloor)
- 15 vs. 30 study
 - Reduction in trawl time (cost, effort, impact)
 - Need to ensure relational catchability with current survey
- Upper Slope Feasibility and Calibration study
 - Add upper portion of Bering slope to annual survey area, more responsive to changing ocean

DRAFT Milestones (funding dependent)

1. Calibration factors derived for slope/shelf surveys (2025)
2. New bottom trawl gear designed and built (2025)
3. New Bering sea survey design proposed and agreed upon (2026)
4. 15min vs 30min catchability/selectivity correction factors derived (2026)
5. New survey gear calibration (2026)
6. Survey time series calibration (2026), transition design (2026), and transition implementation (2027)

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Thank You!



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