

2024 Annual Report on the North Pacific Observer Program

Chapter 3 - Deployment Performance Review

Chapter 6 - NMFS Recommendations

for the North Pacific Fishery Management Council

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Chapter 3

Deployment Performance Review Geoff Mayhew



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Changes Since 2023 ADP

- New stratification method (monitoring method, FMP, **gear type**)
- Proximity allocation method
 - Spreads samples across space and time to minimize gaps
 - Protects against small sample sizes and oversampling
 - Applied to all strata except zero-selection and trawl EM EFP

2024 Deployment Strata

Full coverage:

1. *FULL* - Trips taken by vessels required to have, or opted into, full observer coverage;
2. *EM TRW BSAI (EFP)* - Trips in the trawl EM stratum harvesting pollock with pelagic gear in the BSAI

Partial observer coverage:

1. *OB FIXED BSAI* - Trips using hook-and-line and/or pot gear fishing in the BSAI
2. *OB FIXED GOA* - Trips using hook-and-line and/or pot gear fishing in the GOA
3. *OB TRW BSAI* - Trips using trawl gear fishing in the BSAI
4. *OB TRW GOA* - Trips using trawl gear fishing in the GOA

Partial coverage EM:

1. *EM FIXED BSAI* - Trips by vessels in the EM pool and fished with hook-and-line gear
2. *EM FIXED GOA* - Trips by vessels in the EM pool and fished with pot gear
3. *EM TRW GOA (EFP)* - Trips in the trawl EM stratum harvesting pollock with pelagic gear in the GOA

Zero coverage:

1. *ZERO* - Trips by jig vessels and vessels under 40 ft LOA



Excerpt from **Table 3-5.** -- Number of total vessels, total trips, and sampled trips for full coverage strata in 2023

Strata	Vessels	Trips	Sampled Trips	Coverage		Meets expected?
				Expected	Realized	
<i>Full</i>	104	1,110	1,109	100.0	99.91	No - lower than expected*
<i>EM TRW BSAI (EFP)</i>	65	1,725	1,725	100.0	100.00	Yes

* One full-coverage trip was not monitored, an open access non-pelagic trawl trip targeting Pacific cod. See Appendix C

Excerpt from **Table 3-5.** -- Number of total vessels, total trips, and sampled trips for partial coverage strata in 2024

Strata	Vessels	Trips	Sampled Trips	Coverage		Meets expected?
				Expected	Realized	
<i>OB FIXED BSAI</i>	45	288	137	43.97	47.57	Yes
<i>OB FIXED GOA</i>	292	1,938	241	13.17	12.44	Yes
<i>OB TRW BSAI</i>	3	25	20	72.28	80.00	Yes
<i>OB TRW GOA</i>	46	387	85	20.58	21.96	Yes
<i>EM FIXED BSAI</i>	8	69	34	74.29	49.28	No - Lower
<i>EM FIXED GOA</i>	118	996	224	24.20	22.49	Yes
<i>EM TRW GOA (EFP)*</i>	47	806	288	33.33	35.73	Yes

*Evaluation of shoreside sampling by observers

Excerpt from **Table 3-4.** – ODDS Logged trips in each partial coverage stratum in 2024

Strata	Trip Disposition	Selected Trips	Total Trips	Actual (%)	Programmed (%)	p-value
<i>OB FIXED BSAI</i>	Initial selection	156	325	48.00	43.97	0.147
	Final	141	286	49.30	43.97	0.074
<i>OB FIXED GOA</i>	Initial selection	261	2,074	12.58	13.17	0.455
	Final	229	1,826	12.54	13.17	0.447
<i>OB TRW BSAI</i>	Initial selection	25	32	78.12	72.28	0.557
	Final	20	25	80.00	72.28	0.505
<i>OB TRW GOA</i>	Initial selection	91	456	19.96	20.58	0.772
	Final	87	387	22.48	20.58	0.346
<i>EM FIXED BSAI</i>	Initial selection	65	93	69.89	74.29	0.343
	Final	64	91	70.33	74.29	0.401
<i>EM FIXED GOA</i>	Initial selection	242	999	24.22	24.20	1.000
	Final	219	918	23.86	24.20	0.847



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Combination of Tables 3-2 and 3-3: ODDS Trip cancellations, waivers, and inherits

Strata	Selection Status	Logged	Canceled by system	Canceled by user		Completed Selected Trips	Waived		% inherits
<i>OB FIXED BSAI</i>	Not selected	169	8	19	11.8%				
	Random	156	0	21	13.5%	135	3	2.1%	6.4%
	Inherited	17	0	8	47.1%	9	0		
<i>OB FIXED GOA</i>	Not selected	1,813	141	77	4.6%				
	Random	261	0	61	23.4%	200	1	0.9%	13.1%
	Inherited	36	0	5	13.9%	31	1		
<i>OB TRW BSAI</i>	Not selected	7	0	2	28.6%				
	Random	25	0	6	24.0%	19	0	0.0%	5.0%
	Inherited	1	0	0	0.00%	1	0		
<i>OB TRW GOA</i>	Not selected	365	16	49	14.0%				
	Random	91	0	14	15.4%	77	0	0.0%	11.5%
	Inherited	12	0	2	16.7%	10	0		
<i>EM FIXED BSAI</i>	Not selected	28	1	0	0.0%				
	Random	65	1	1	1.6%	63	0	0.0%	1.6%
	Inherited	1	0	0	0.0%	1	0		
<i>EM FIXED GOA</i>	Not selected	757	25	34	4.6%				
	Random	242	16	13	5.8%	213	0	0.5%	2.7%
	Inherited	13	0	6	46.2%	7	1		

Figures 3-3 and 3-4. – Distributions of data timeliness and review timeliness

Data timeliness: Time between the end of a delivery and the availability of monitoring data for catch accounting.

- Due to a NMFS database coding error, there was a delay in the receipt of reviewed data by PSMFC, so data timeliness for the fixed-gear EM strata was inflated (Figure 3-3).
- Figure 3-4 was added this year to additionally provide the **review timeliness** (end of delivery to completion of review)

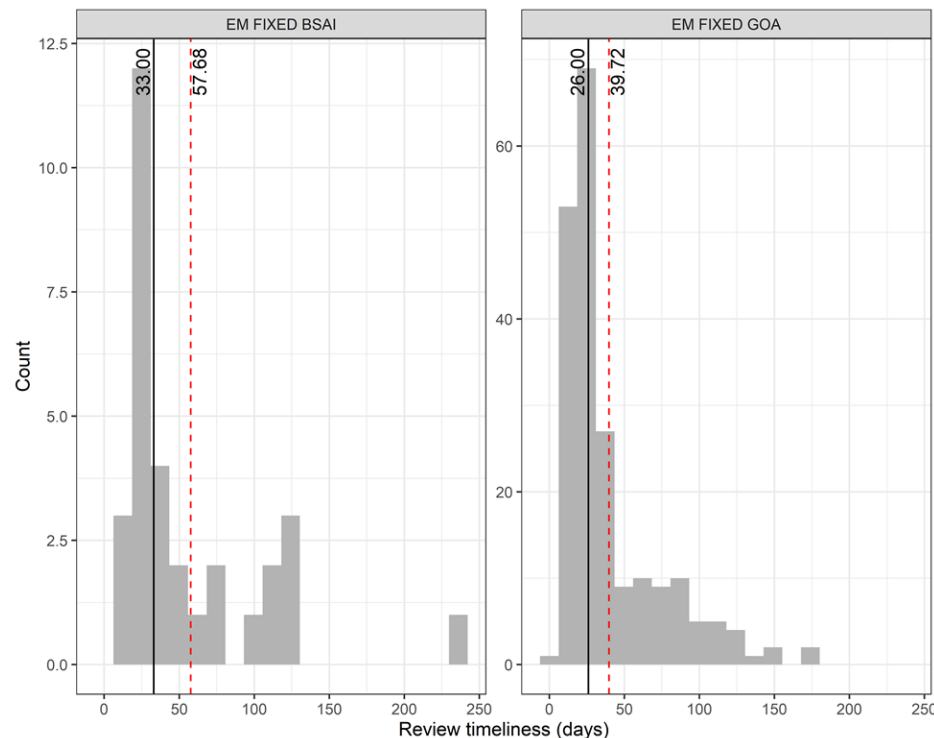


Figure 3-4. – Distributions of review timeliness in the *EM FIXED* strata

Figures 3-5: Temporal patterns in sampling

- In all evaluations of sample quality, we considered **when and where** samples were collected
 - Observed OR
 - EM with review completed
- For most strata, monitoring occurred throughout the year at the expected rates except for in the *EM FIXED BSAI* stratum, which fell below the expected rates mid-year.
 - Temporarily reduced reviewer capacity

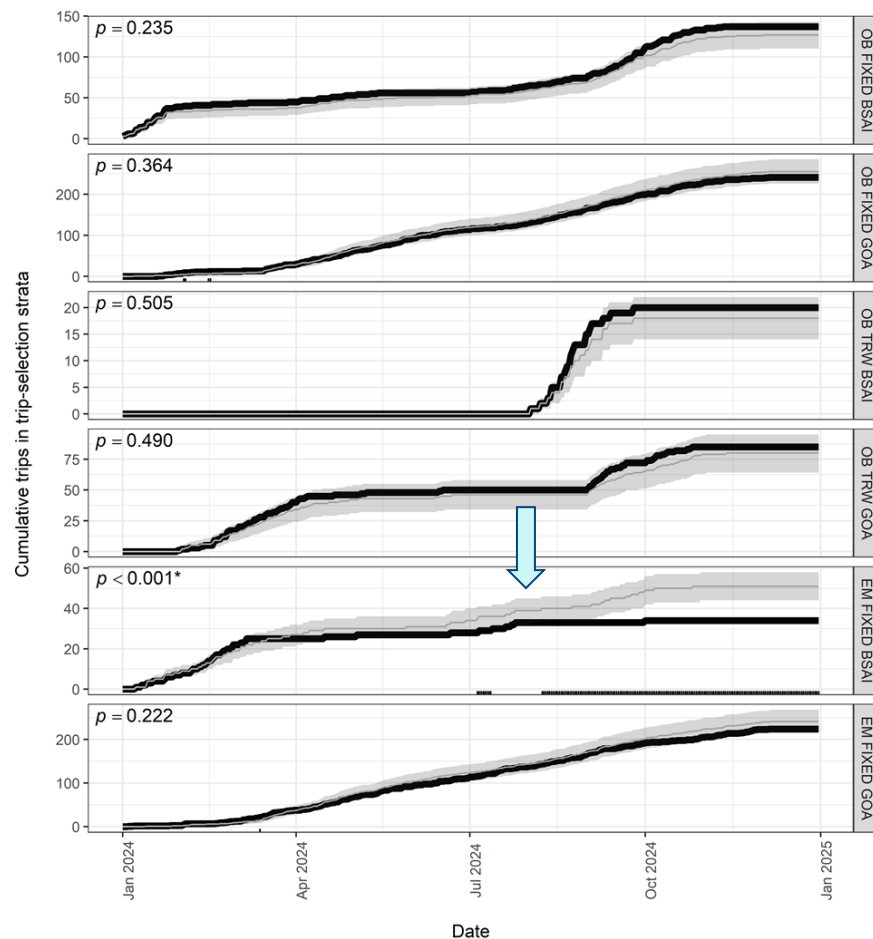


Figure 3-6: Spatial patterns in sampling

- Most strata showed no particular patterns in representativeness of samples, with two exceptions:
- *OB FIXED BSAI* in the eastern portion of the Aleutian Islands
- *EM FIXED BSAI*, also in the eastern portion of the Aleutian Islands
 - Caused by incomplete review of EM hard drives, mostly Pot trips between mid-March - November

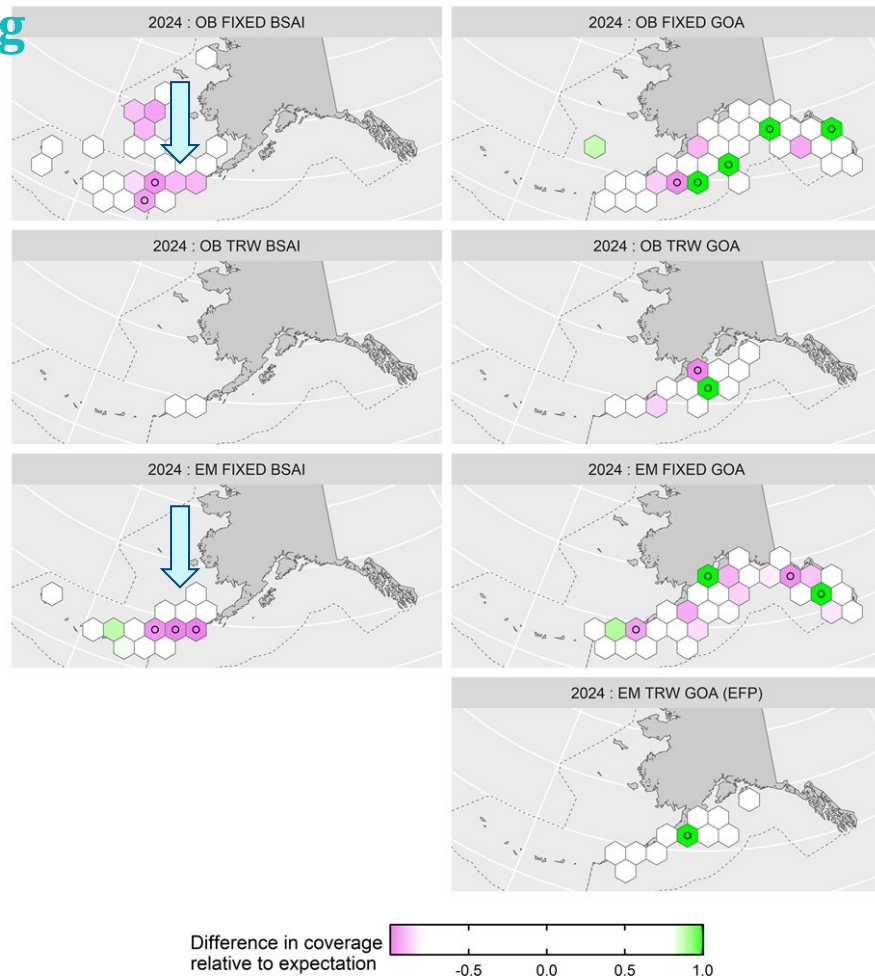
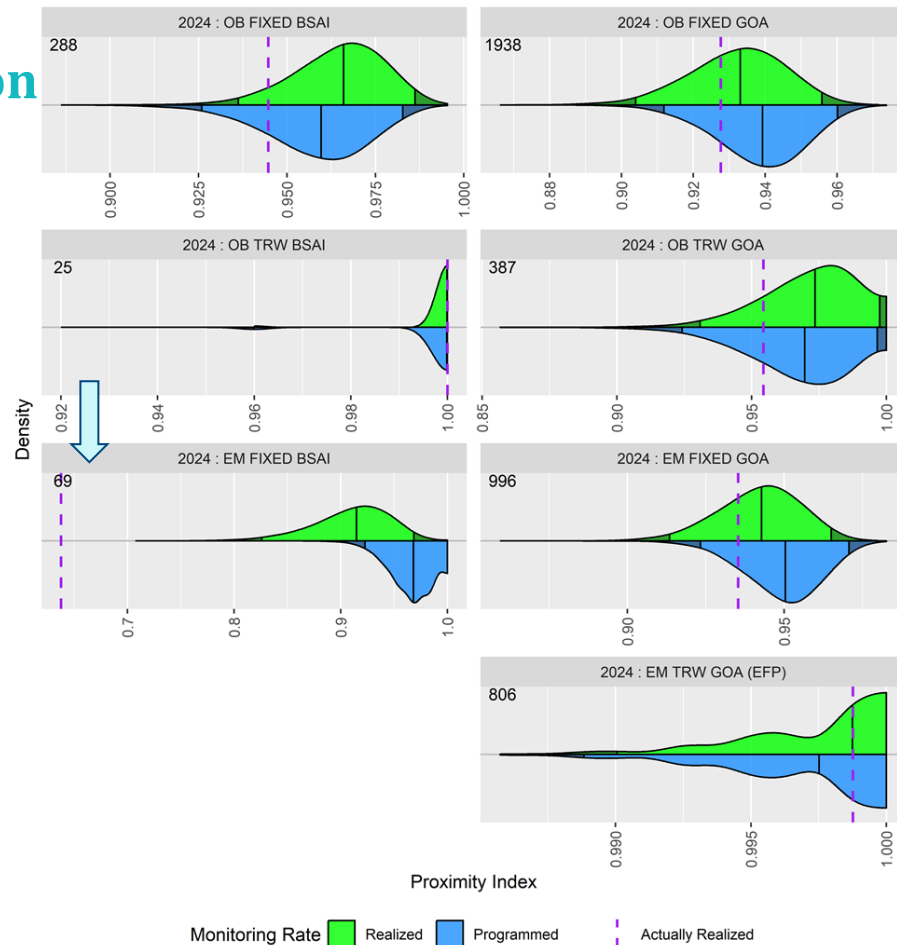


Figure 3-7: Spatiotemporal distribution of coverage (proximity indices)

- **Proximity indices:** proportion of trips monitored or neighboring a monitored trip in space and time
- Most strata **achieved** proximity indices expected by the **rates set by the ADP (blue)** and by the **realized monitoring rates (green)**
- *EM FIXED BSAI* expected an index of over 0.9 but achieved 0.64
 - Caused by incomplete review of EM hard drives, mostly Pot trips between mid-March - November



Chapter 6

NMFS Recommendations



NMFS Recommendations for 2026 Draft Annual Deployment Plan

Deployment Design

- Continue proximity allocation method for the partial coverage strata (except for trawl EM)
 - For the Trawl EM stratum in the BSAI, all offloads from Trawl EM trips are to be sampled for salmon, halibut, and biological data. In the GOA, NMFS recommends maintaining the sampling rate where all EM deliveries are monitored for salmon and halibut PSC and 33% are sampled by shoreside fishery observers for biological data.
- Maintain current stratification based on monitoring method (Observer, EM Fixed Gear, EM Trawl), Fishery Management Plan (BSAI, GOA), and gear type (Fixed, Trawl):
 - Observed fixed gear trips in the GOA (*OB FIXED GOA*)
 - Observed fixed gear trips in the BSAI (*OB FIXED BSAI*)
 - Observed trawl gear trips in the GOA (*OB TRW GOA*)
 - Observed trawl gear trips in the BSAI (*OB TRW BSAI*)
 - EM fixed gear trips in the GOA (*EM FIXED GOA*)
 - EM fixed gear trips in the BSAI (*EM FIXED BSAI*)
 - EM trawl gear deliveries in the GOA (*EM TRW GOA*)
 - Zero-coverage (under 40, jig, troll gear)



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EM Video Review

- Collaborate with PSMFC to monitor video review progress and enable a review strategy that will result in EM video review times that result in the most useful information for the most number of trips for a given cost.
- Collaborate with PSMFC to develop specific prioritization rules that can be used to allocate review effort to the fisheries, gear types, times and areas that are the most dependent on EM data for management needs.

NMFS Recommendations for 2026 Draft Annual Deployment Plan

Fixed-Gear EM

- Maintain an EM selection pool composed of up to 178 fixed gear vessels, which would maintain the size of the EM pool from 2025.
- Prioritize placement in the EM selection pool based on vessel size, fishing effort, minimizing data gaps, and cost efficiency
- For vessel operators with repeated problem causing data loss, NMFS may disapprove Vessel Monitoring Plans and the vessel may be removed from the EM pool

NMFS Recommendations for 2026 Draft Annual Deployment Plan

EM Development

- Continue to collaborate with industry partners on EM development and cost efficiency projects
- Work with FMAC and PCMAC to develop priorities and potential grant proposals to National Fish and Wildlife Foundation

Acknowledgements

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