



North Pacific Observer Program 2015 Annual Report

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Presented by
Fishery Monitoring and Analysis Division,
Alaska Fisheries Science Center, Seattle

Annual Report Overview

- This is the third Annual Report for the North Pacific Observer Program that takes a retrospective look at the previous year and an outlook for the coming year that will inform the 2017 Annual Deployment Plan presented to the Council in October.
- This report provides information, analyses, and recommendations on the methods used for deploying and funding partial coverage observers in the North Pacific Observer Program.
- The report includes information on Fees and Budget, Deployment Performance Review, Descriptive Information, Compliance and Enforcement, and Outreach for the Observer Program in 2015.

Overview

- In 2015, 478 individual observers were trained, briefed, and equipped for deployment to vessels and processing facilities operating in the Bering Sea and Gulf of Alaska groundfish fisheries.
- Observers collected data on board 496 fixed gear and trawl vessels and at 7 processing facilities for a total of 46,640 observer days¹.
- Of the 478 observers, 192 were new observers The FMA Division conducted 10 three-week training classes in 2015 for a total of 7.5mos.
- With few exceptions AIS Inc. was able to successfully deploy 95 observers from 32 ports for 5,318 days at sea with a minimal number of trips released due to unavailability of an observer (6).

1. Exceeded last year's total by 2,500. Nationally approximately 972 observers deploy on ~82,000 sea days annually.

Overview (continued)

- There were 658 debriefings in Seattle completed by 21 FMA staff and 96 debriefings in Anchorage completed by four FMA staff. Debriefing wait times were significantly reduced from 12 to 5 days due to new partial coverage inseason advising and debriefing procedures.
- The Observer Declare and Deploy System (ODDS) performed as expected with no service interruptions and 7,046 trips logged by vessels >40 feet. The ODDS team received a DOC Bronze Award².
- NMFS held 15 outreach events in 2015 in Seattle, Sitka, Kodiak, and Homer to maintain a dialogue with industry members and inform them about changes to the program, vessel responsibilities, EM, observer sampling, and the objectives of quality collection of data and management.

2. Recipients - Paul Packer, Julie Blair, Glenn Campbell, Farron Wallace, Craig Faunce, and Heather Weikart

Fees and Budget

- The budget for observer deployment in 2015 in the partial coverage category was \$5,758,268. The budget was made up of \$3,058,036 in fees (from 2014 landings) and \$2,700,232 in NMFS funds.
- \$1,247,044 in observer fees were carried over from 2015 to 2016.
- The breakdown in contribution to the 2015 observer fee liability by species was: 35% halibut, 23% sablefish, 21% Pacific cod, 19% pollock, and 2% all other groundfish species.
- Fee billing statements for all landings that occurred in 2015 were mailed to 100 processors in January, 2016, for a total of \$3,775,956. These funds will be used to fund the observer contract from June 2016 through June 2017.

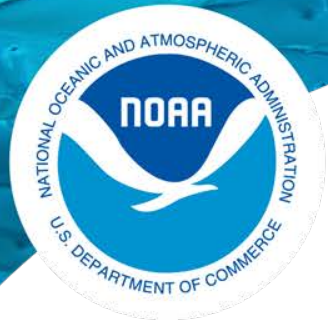
Fees and Budget

	2013		2014		2015		2016	
	Fees	Federal	Fees	Federal	Fees	Federal	Fees	Federal
Funds at the start of the calendar year	\$0		\$0		\$1,206,846		\$1,247,044	
Funds deposited during the calendar year	\$0		\$4,251,452		\$3,458,715		\$3,775,956	
Funds paid out during the calendar year	\$0	\$2,115,166	\$3,044,606	\$1,892,808	\$3,058,036	\$2,700,232	\$5,023,000	
Observer Days at the start of the calendar year	0	4,535	0	2,915	2,679	239	2,708	203
Observer Days purchased during the calendar year	0	1,913	2,596	1,772	2,976	2,354	4,937	
Observer Days used during the calendar year	0	3,533	125	4,448	2,928	2,390		

Cost for Partial Coverage

- In 2015, NMFS spent \$5,758,268 to procure 5,318 observer days for an average cost per observer day of \$1,083 per day.
- This rate is on par with partial coverage government contracted observer costs in other regions³. There are several factors that effect costs in partial coverage:
 - Federal contracts are subject to Federal Acquisition Regulations, Fair Labor Standards Act, Service Contract Act, and Department of Labor wage rate determinations which establish minimum wages and other benefits;
 - Partial coverage observers deploy out of many small, remote ports thus increasing costs
 - Average trip duration is 3-5 days vs 60-90 days in full coverage
 - Travel costs are reimbursed according to Government Travel Regulations

3. NE - \$1,227; SE - \$1,184; Gulf of Mexico - \$1,300.



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Deployment Performance Review of the 2015 North Pacific Groundfish and Halibut Observer Program

2016 Observer Science Committee

Presented by
Fishery Monitoring and Analysis Division, Alaska Fisheries Science Center, Seattle

North Pacific Fishery Management Council

June, 2016

Seattle, WA

The Analytical Team

Analyses were performed by the Fisheries Monitoring and Analysis Division in consultation with experts with practical knowledge of observer data. The Division convenes its observer science committee annually. This years members included:

- Craig Faunce (AFSC/FMA)
- Jason Gasper (AKRO/SF)
- Jennifer Cahalan (PSMFC)
- Sandra Lowe (AFSC/REFM)
- Ray Webster (IPHC)
- Steve Barbeaux (AFSC/REFM)

This review is intended to inform the Council and the public of how well various aspects of the program are working and lead to recommendations for improvement (based on the data). OSC recommendations do not need to equate to official NMFS recommendations or actions for future ADPs.

Why so Random?

The observer program in Alaska is very large. However, the quantity of data provided must be useful.

To be useful, it must be unbiased.

To be unbiased, observers must collect information on all catch events, or must collect information on a subset of catch events.

To collect information on all catch events requires a lot of resources, and carries huge risk if not all catch is observed. On the other hand, sampling a subset of catch events is more efficient.

To be useful and unbiased, this sample data must be collected under randomization protocols. Random does not equal bad or haphazard.

For this reason, the observer program goes crazy trying to be random.

Observer Deployment 2015



Partial Coverage Two Year comparison: Overview

	2014	2015*
Total Funding (\$)	4,937,414	5,758,268
Total days funded	4,573	5,318
Cost Day (\$)*	1,080	1,083
Number of strata to evaluate	11	5
Effort prediction accuracy (ADP YEAR - 1 vs. Total days funded)	-7.4	-3.6

* Total funding divided by total days funded

Partial Coverage Two Year comparison: Observed Effort

	2014				2015			
	All	VS = t	TS = T	Zero	All	t	T	Zero
Total trips	8,789	2,079	4,390	2,320	8,825	2,148	4,676	2,093
Observed trips	986	324	662	0	1,335	241	1,094	2
Observed %	11.2	15.6	15.1	0.0	15.0	11.2	23.4	0.0

Partial Coverage Two Year comparison: ODDS

	2014	2015*	
	TS (T)	t	T
Total trips logged	4,383	2,147	4,368
Programmed Selection %	15.1	12.0	24.0
Actual Random # Selection Rate	15.5	11.6	23.8
Cancellation % (Not-Selected Trips)	5.0	2.9	3.8
Cancellation % (Selected trips)	18.5	23.7	13.2
Selection rate as programmed?	Yes	Yes	Yes
Are initial and final selection rates similar over time?	No	No	No

* Does not include EM trips



Partial Coverage Two Year comparison: Temporal and Spatial Bias

	2014		2015	
	VS = t	TS = T	t	T
At-sea deployment rates as expected?	No	Yes	Yes	Yes
Dockside deployment rates as expected?	No (King Cove, Akutan)		No (King Cove)	
Temporal observation rates as expected?	NA	No (15.3%)	Yes (0%)	Yes (0.6%)
Spatial observation rates as expected?	No	Yes	No	Maybe*

* Two, not one area was associated with a low p-value; patterns not consistent between years.

Partial Coverage Two Year comparison: Trip Metrics

	2014	2015	
	VS (t) + TS (T)	t	T
Observed trips same as unobserved?	NA	No* 8-14% shorter trips when observed 1% less diverse	
Tendered trips same as non-tendered?	No	No	

* Although the number of low p-values was equal to expected, the same metric was found in both strata; Since catch metrics are the same, is this evidence of differential behavior?

Partial Coverage Two Year comparison: Trip Metrics

	2014		2015	
	VS (t) + TS (T)		t	T
Observed trips same as unobserved? (tendered trips only)	No		Maybe	
	9% shorter trips with 6% less pure catch when observed		33–101% less catch when observed ¹	
			25% fewer species	51% shorter trips
Observed trips same as unobserved? (non-tendered trips only)	VS (t)	TS (T)	t	T
	No ²	No ³	No ⁴	
		2.5% shorter vessels	5-13% shorter trips when observed	
		9% Less catch	3.4% fewer areas	1.2% less diverse

1 Although this result was not associated with a p-value of < 0.05, large effect sizes were found..

2 expected two low p-value tests, had 18.

3 No comment on this result, when evaluated by gear, Hook and Line and Trawl gear different.

4 Although the number of low p-values was equal to expected, the same metric was found in both strata;

Since catch metrics are the same, is this evidence of differential behavior?

Adequacy of sample size:

The observer at sea is providing NMFS with at-sea discard rates on catcher vessels that are applied to landed catch to produce total catch. The goal is to apply discard rates from observed trips to unobserved trips with similar traits (you wouldn't want to apply discard from a BSAI trawler to a GOA trawler for example).

For this reason, it is important that for each NMFS Area there is at the very least one observed trip. We can evaluate the likelihood of “missing” an area from 2015 data.

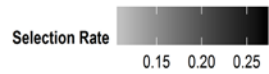
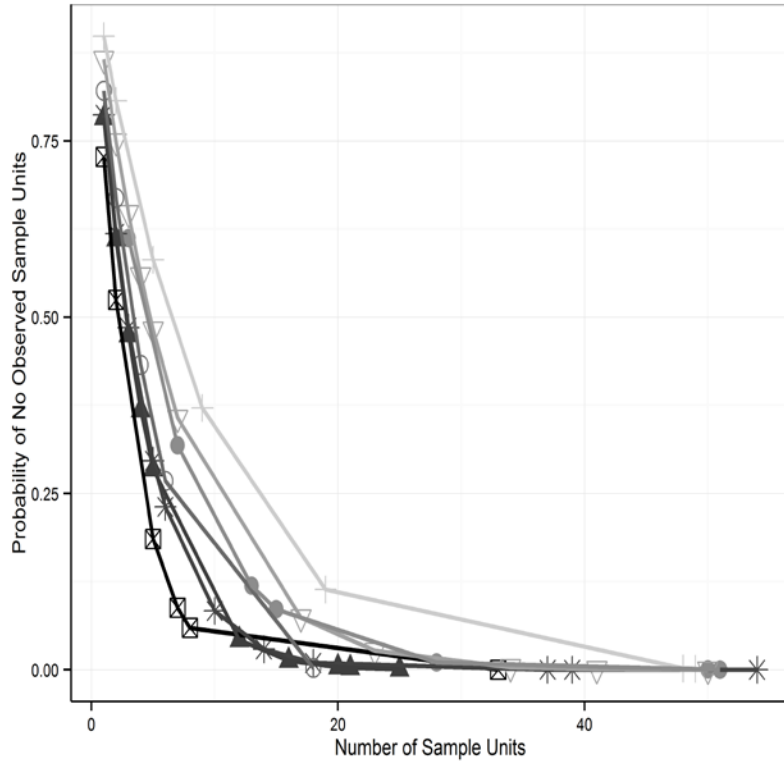
The likelihood of missing goes down as you:

- Increase the number of trips in an area
- Increase the sampling rate

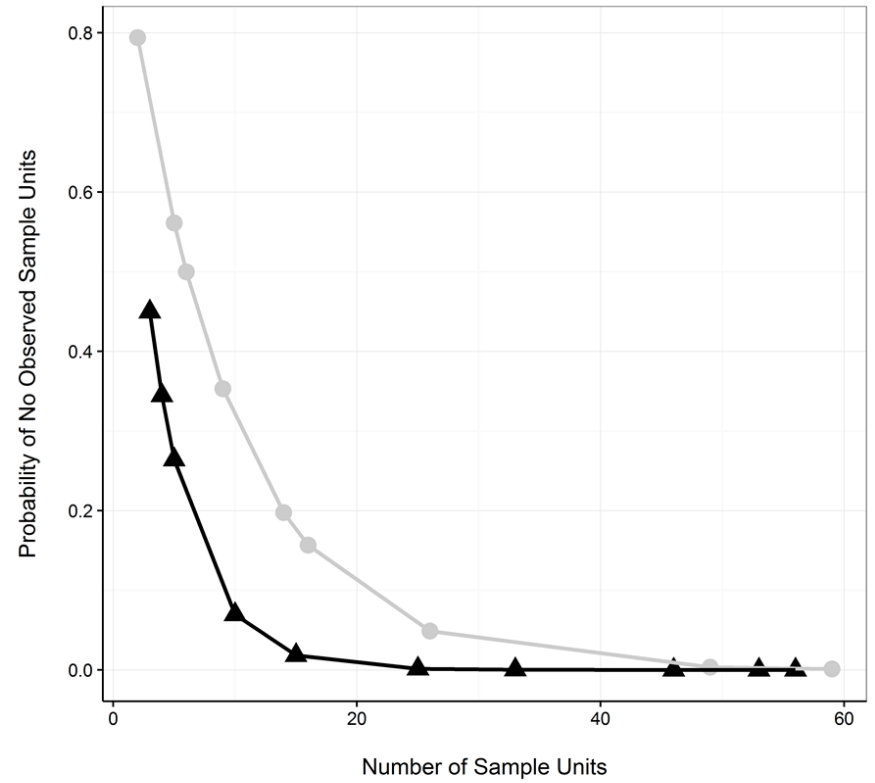
Areas and gears with low amounts of effort activity will require higher selection rates to observe than areas and gears with large amounts of effort.

Small deployment “boxes” require higher rates of selection.

2014



2015





See More At: <https://alaskafisheries.noaa.gov/fisheries/observer-program>

Recommendations for 2017 ADP

	Recommendation	Status
No Selection	<ul style="list-style-type: none"> Continue to place vessels less than 40ft in the no selection pool for observer coverage vessels less than 40ft be considered for testing of EM Continue to allow vessels opportunity to 'opt-in' to the EM selection pool under 2017 EM pre-implementation <ul style="list-style-type: none"> Vessels participating in the EM selection pool be required to log trips in ODDS. This will improve the ability of NMFS to determine which vessels are in the EM selection pool, when they are fishing, and provides a necessary compliance monitoring tool. 	<p>Continue 2016 protocols in 2017</p> <p>New Recommendation</p>
Dockside Monitoring	<ul style="list-style-type: none"> Maintain current dockside monitoring sampling for pollock deliveries. 	<p>Continue 2016 protocols in 2017</p>

Recommendations for 2017 ADP

	Recommendation	Status
Trip Selection	<ul style="list-style-type: none"> Maintain 3 sampling strata defined by gear (pot, hook-and-line, and trawl) for the 2017 ADP Continue to allow vessels to log three trips in ODDS Continue to automatically release vessels 40-57.5 feet in length from observer coverage if the two previous trips were observed trips (i.e., if two trips in a row were observed and a third trip is selected, then the third trip will be released from coverage). 	Continue 2016 protocols in 2017
	<ul style="list-style-type: none"> Within budget constraints, recommend that sampling rates be high enough in each stratum to reasonably expect three observed trips in each NMFS Area. NMFS recommends evaluating 2 additional strata for the 2017 ADP for vessels delivering to tenders and partial coverage catcher-processors. 	New Recommendation

Acknowledgments

Chapter 3 was written and reviewed by the 2016 Observer Science Committee:

- Craig Faunce, AFSC
- Jennifer Cahalan, AFSC/PSMFC
- Jason Gasper, AKRO
- Steve Barbeaux, AFSC
- Sandra Lowe, AFSC
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For more information:

<http://alaskafisheries.noaa.gov/sustainablefisheries/observers/default.htm>



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