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Fisheries Observation Science Program Coverage Rates, 2002–23

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National Oceanic and Atmospheric Administration
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Northwest Fisheries Science Center

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(Somers et al. 2024)¹

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Fisheries Observation Science Program Coverage Rates, 2002–23

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Summary

The Fisheries Observation Science (FOS) Program at the Northwest Fisheries Science Center (NWFSC) places trained scientists, known as observers, on U.S. West Coast fishing vessels to collect data on catch composition and amount, obtain biological samples, collect information on fishing operations, and record interactions with protected species, among other duties. Landings are calculated based on fish ticket data from the Pacific Fishery Information Network (PacFIN). This report summarizes coverage rates—defined as the proportion of targeted landings associated with observed trips to total targeted landings across all trips in the fleet—in those fisheries observed by FOS.¹ The species considered to be targeted are defined based on the fishery and described in the header of each table in the associated spreadsheets. The total targeted landings by each fleet are reported even in years when FOS did not observe any trips.

FOS consists of two distinct components: the At-Sea Hake Observer Program (A-SHOP) and the West Coast Groundfish Observer Program (WCGOP). A-SHOP observes hake fleets that process catch at sea. A-SHOP began data collection in 1975, but administration of the program was not transferred to NWFSC until 2001. This report presents data only from after this transfer, and the full operationalization of WCGOP in 2002. WCGOP observes a number of fleets that deliver catch shoreside for processing, including sectors that target and incidentally impact groundfish. WCGOP specifically focuses on at-sea discard estimates. In the WCGOP data especially, the level of observer coverage and sampling can vary greatly between fisheries, years, and spatial strata. This report quantifies the magnitude of expansions required to use observer data to estimate fleetwide levels of discard, and can highlight areas where estimates are less certain (methods are further described in Somers et al. 2023).

Each year, this report is updated to include the most recent year of data, the most current data from FOS and PacFIN for previous years, and the most recent data processing procedures. All updates are described in an annual report on groundfish mortality, available in draft form in the Pacific Fishery Management Council September Briefing Book and then finalized in a NOAA Technical Memorandum (2022 data: Somers et al. 2023).

¹<https://www.fisheries.noaa.gov/west-coast/science-data/fisheries-observation-science-west-coast>

Observer Coverage Rates in 2023

To contextualize analyses utilizing data from the FOS Program, we analyzed observer coverage rates in those fleets with less than 100% of trips observed. We summarize these rates coastwide and note these patterns may differ if summarized using different strata, such as seasonal periods or state waters. At the coastwide level, five of the eleven sectors were observed at rates at or below the historical median; none were below the historical minimum (Table 1, Figure 1).

Overall, WCGOP observed more landings in 2023 than in the median of the previous five years in most sectors, despite similar or greater total landings in the majority of fleets. Compared to the previous five years (2017–22), observed landings in 2023 were below the 2017–22 median in only the pot portion of the catch shares electronic

Table 1. Observer coverage rates, defined as the percentage of total targeted landings observed in a fishery. *Minimum* and *Median* summarize all years of coverage through 2023. Sectors with 2023 coverage rates at or below the historical median are shaded. Abbreviations: *EM* = electronic monitoring; *FG* = fixed gear.

Sector	Minimum	Median	2023
Catch shares EM - Pot	14%	35%	27%
Catch shares EM - Trawl	8%	22%	33%
Daily trip limit FG - Line	1%	5%	4%
Nearshore	2%	6%	6%
Open access FG - Line	1%	4%	3%
Open access FG - Pot	2%	7%	5%
California halibut trawl	1%	15%	19%
Directed Pacific halibut	4%	6%	18%
Limited entry FG - Line	7%	27%	30%
Limited entry FG - Pot	13%	35%	53%
Pink shrimp	4%	10%	12%

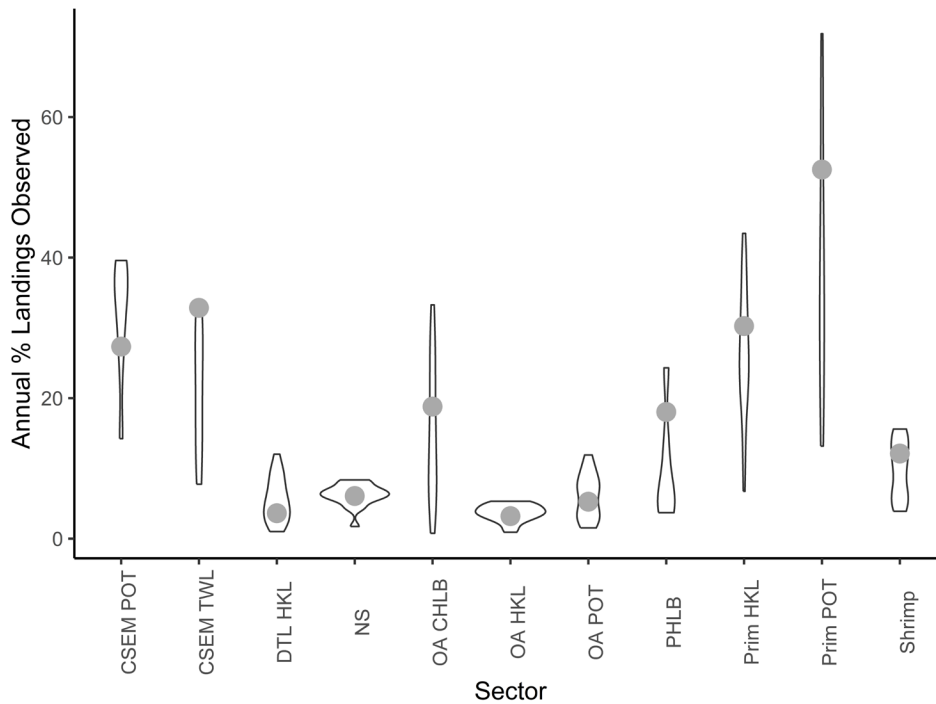


Figure 1. Violin plots of percentage of annual landings observed across all years of observer coverage in those sectors where less than 100% of trips are observed; gray point represents percentage of landings observed in 2023. Sector name abbreviations: *CHLB* = California halibut, *CSEM* = catch shares electronic monitoring, *DTL* = daily trip limit, *HKL* = hook-and-line, *NS* = nearshore, *OA* = open access, *PHLB* = Pacific halibut, *Prim* = primary, *TWL* = bottom trawl.

monitoring fishery, and the nearshore fishery (Table 2). The decrease in the catch shares electronic monitoring pot fishery reflects the reporting of the electronic monitoring portion of the fleet separately from the 100% observed portion of the fleet for the first time in three years. This was possible due to an increase in the number of vessels active in the 100% observed portion of the fleet, allowing the subsectors to meet confidentiality requirements for separate reporting. In the nearshore fleet, the slightly lower observed landings reflect a similar decrease in fleetwide landings.

As in previous years, the uncertainty in resulting point estimates will be quantified in reports and summaries of these datasets, and should be considered in analyses and management decisions.

Table 2. Observed and fleetwide landings amounts. Abbreviations: *EM* = electronic monitoring, *FG* = fixed gear. All numbers are in metric tons (mt).

Sector	Observed catch: 5-year median	Observed catch: 2023	Fleetwide catch: 5-year median	Fleetwide catch: 2023
Catch shares EM – Pot	164	145	679	530
Catch shares EM – Trawl	453	654	2,285	1,990
Daily trip limit FG – Line	8	11	406	302
Nearshore	33	27	471	451
Open access FG – Line	15	17	293	528
Open access FG – Pot	9	12	156	227
California halibut trawl	30	37	121	196
Directed Pacific halibut	8	18	142	97
Limited entry FG – Line	265	333	941	1,101
Limited entry FG – Pot	251	372	537	708
Pink shrimp	2,583	3,211	26,209	26,511

References

Somers, K. A., K. E. Richerson, V. J. Tuttle, and J. T. McVeigh. 2023. Estimated Discard and Catch of Groundfish Species in the 2022 U.S. West Coast Fisheries. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-187. DOI: 10.25923/1m2m-1008



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