NOAA Data Report NMFS-NWFSC-DR-2022-02

https://doi.org/10.25923/ky3a-g655

Fisheries Observation Science Program Coverage Rates, 2002–21

October 2022

U.S. DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration
National Marine Fisheries Service
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NOAA Data Report Series NMFS-NWFSC-DR

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Recommended citation:

(Somers et al. 2022)[1]

[1] Somers, K. A., K. E. Richerson, V. J. Tuttle, and J. T. McVeigh. 2022. Fisheries Observation Science Program Coverage Rates, 2002–21. U.S. Department of Commerce, NOAA Data Report NMFS-NWFSC-DR-2022-02.

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Fisheries Observation Science Program Coverage Rates, 2002–21

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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. This report summarizes coverage rates in those fisheries observed by FOS.[1] Coverage rates are defined as the proportion of total targeted landings across all trips in the fleet, based on fish ticket data from the Pacific Fishery Information Network (PacFIN), that are associated with observed trips. The species considered to be targeted are defined based on the fishery and described in the header of each table. The total targeted landings by each fleet are reported even in years when FOS did not observe any trips.

FOS consists of two programs: the At-Sea Hake Observer Program (A-SHOP) and the West Coast Groundfish Observer Program (WCGOP). A-SHOP observes the hake fleets that process catch at sea, while 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. 2022).

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 (2020 data: Somers et al. 2022).

[1] https://go.usa.gov/xFeSJ

Observer Coverage Rates in 2021

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 for individual states and ports. At the coastwide level, five of the eleven sectors were observed at rates below the historical median; none were below the historical minimum (Figure 1, Table 1).

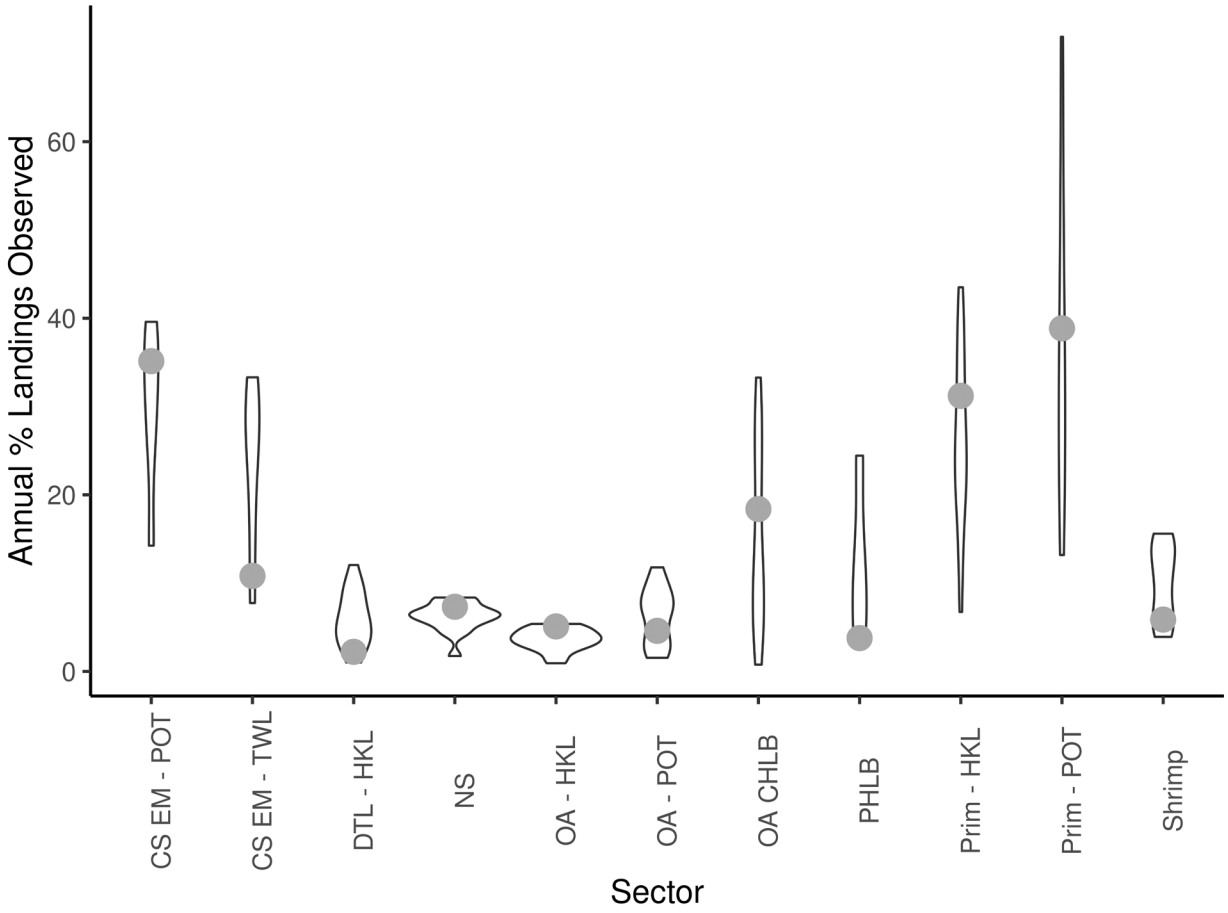

Figure 1. Violin plots of percentage of annual landings observed across all years of observer coverage in those sectors where less than 100% of trips are observed; gray points represent percentage of landings observed in 2021. Sector name abbreviations: *CHLB* = California halibut, *CS EM* = catch share electronic monitoring, *DTL* = daily trip limit, *HKL* = hook-and-line, *NS* = nearshore, *OA* = open access, *PHLB* = Pacific halibut, *Prim* = primary, *TWL* = trawl.

Observed landings in 2021 were below the 2016-20 median in the hook-and-line portion of the daily trip limit fleet, the pot portion of the open access fleet, the trawl portion of the catch shares electronic monitoring fleet, and the pink shrimp fishery. Fleetwide landings in 2021 were also below the 2016-20 median in the hook-and-line portion of the daily trip limit fleet, the pot portion of the open access fleet, and the trawl portion of the catch shares electronic monitoring fleet, while landings by the directed Pacific halibut and the pink shrimp fishery were greater than the five-year median.

The coverage rates of the remaining six non-catch share sectors were above the historical median. Observed and fleetwide landings in the hook-and-line portion of the open access fleet and the nearshore fishery in 2021 were approximately the same as the 2016-20 median. In the open access California halibut fishery and the pot portion of the catch shares electronic monitoring fleet, both observed and fleetwide landings in 2021 were greater than the 2016-20 median; in the hook-and-line portion of the primary sablefish fleet, 2021 observed and fleetwide landings were lower than the 2016-20 median. Observed landings in the primary sablefish pot fleet were lower in 2021 than the 2016-20 median, but fleetwide landings were greater.

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 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 2021. Sectors with 2021 coverage rates below the historical median are shaded. Sector name abbreviations: *CHLB* = California halibut, *CS EM* = catch share electronic monitoring, *DTL* = daily trip limit, *HKL* = hook-and-line, *NS* = nearshore, *OA* = open access, *PHLB* = Pacific halibut, *Prim* = primary, *TWL* = trawl.

Sector	Minimum	Median	2021
CS EM—POT	14%	32%	35%
CS EM—TWL	8%	26%	11%
DTL—HKL	1%	5%	2%
NS	2%	6%	7%
OA—HKL	1%	4%	5%
OA—POT	2%	7%	5%
OA CHLB	1%	13%	18%
PHLB	4%	11%	4%
Prim—HKL	7%	26%	31%
Prim—POT	13%	33%	39%
Shrimp	4%	10%	6%

References

Somers, K. A., J. E. Jannot, K. E. Richerson, V. J. Tuttle, and J. T. McVeigh. 2022. Estimated Discard and Catch of Groundfish Species in the 2020 U.S. West Coast Fisheries. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-175. DOI: 10.25923/e6es-0r06

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October 2022

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