OBSERVED AND ESTIMATED TOTAL BYCATCH OF SALMON IN THE 2002-2019 U.S. WEST COAST FISHERIES: COVER PAGE

This report summarizes the observed and estimated total bycatch of all salmon species observed in fisheries monitored by the West Coast Groundfish Observer Program (WCGOP), the At-Sea Hake Observer Program (A-SHOP), the Electronic Monitoring (EM) Program, and the Catch Monitor (CM) Program. For nearly all sectors, we report bycatch in terms of individual counts and weights. Methods used follow the previous salmon report (Somers et al. 2015) and the most recent groundfish mortality report (Somers et al. 2020).

The Fisheries Observation Science (FOS) Program at the Northwest Fishery Science Center consists of two programs, the At-Sea Hake Observer Program (A-SHOP) and the West Coast Groundfish Observer Program (WCGOP). The A-SHOP observes the hake fleet that processes catch at sea, while the WCGOP observers a number of fleets that deliver catch shoreside for processing, including sectors that target and incidentally impact groundfish. Both programs place trained scientists on board commercial fishing vessels to observe and sample all catch; the WCGOP specifically focuses on at-sea discard estimates. Once landed shoreside, catch is sampled by the CM Program; for vessels fishing under maximized or optimized retention, this sampling quantifies the majority of their bycatch. This report also includes fish ticket landings data from the Pacific Fishery Information Network (PacFIN).

Every year this report is updated to include the newest year of data, the most current data from the FOS and PacFIN for previous years, and the most recent data processing procedures. Data processing updates are described in the Groundfish Mortality report, which is available in draft form annually in the Pacific Fishery Management Council September Briefing Book and later in the year in final form via a Technical Memorandum. The tables in this product will also be published as a data report later this year, and the tables presented here should be considered a draft product.

In this report, for each sector in which salmon bycatch occurred, we provide two tables, one showing observer or sampling coverage for all strata with observed effort and a second showing bycatch data. Unobserved strata are not shown in coverage tables, and strata without salmon interactions are not shown in bycatch tables. All count values were rounded to an integer value using standard rounding rules in each table for presentation purposes; for that reason, a sum of the rounded values over rows within sector-level tables may not be equivalent to the value in the final summary tables. For the catch share bottom trawl fishery and catch shares EM fisheries, depth strata have been updated to reflect depth bins more relevant to salmon management (0-100 fm, 100-150 fm, 150-250 fm, and 250+ fm). This update applies to estimates disseminated in 2019 and thereafter. Note that this may result in slightly different estimates of total bycatch relative to the previous depth stratification scheme. In addition, we now include an estimate of bycatch *rates* for A-SHOP and catch shares fisheries (total salmon bycatch divided by total landed target weight in a strata). Due to rounding,

there may be slight differences between the presented rate and the presented bycatch value divided by the presented total landed target weight.

We do not present tribal data in this report.

This report is available in electronic format only as an MS Excel workbook (Agenda Item G.1.b, NMFS NWFSC Report 1: Observed and Estimated Total Bycatch of Salmon in the 2002-2019 U.S. West Coast Fisheries) and is linked on the Pacific Fishery Management Council's November 2020 Advanced Briefing Book webpage. Detailed description of the data sets in the report is available in the MS Excel file.

References

Somers, K. A., M.A. Bellman, J.E. Jannot, Y.-W. Lee, J. McVeigh, and V. Tuttle. 2015. Observed and estimated total bycatch of salmon in the 2002-2013 U.S. west coast fisheries. West Coast Groundfish Observer Program. National Marine Fisheries Service, NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

Somers, K.A., J.E. Jannot, K.E. Richerson, V.J. Tuttle, N.B. Riley, and J.T. McVeigh. 2020. Estimated discard and catch of groundfish species in the 2019 U.S. west coast fisheries. NOAA Fisheries, NWFSC Observer Program, 2725 Montlake Blvd E., Seattle, WA 98112.