

NATIONAL MARINE FISHERIES SERVICE REPORT ON COST SAVINGS AND EFFICIENCIES IN THE TRAWL RATIONALIZATION PROGRAM

Purpose of this report

In previous discussions on cost recovery in the West Coast groundfish trawl rationalization program (trawl program), the Pacific Fishery Management Council (Council) and its Groundfish Advisory Subpanel (GAP) have raised questions about whether and how reduced costs resulting from perceived efficiencies as a result of the program are accounted for when the National Marine Fisheries Service (NMFS) determines the actual incremental costs for cost recovery, as specified in regulations at 50 CFR 660.115(b)(1)(i)^{1,2}. In this report, NMFS provides an overview of agency costs with and without the trawl program and a discussion of cost savings and efficiencies by function. Appendix A of this report presents a summary of the same information in a table modeled on Appendix D of the 2011 Trawl Rationalization Cost Recovery Committee Report³.

Background

Trawl program design and cost recovery requirements

The trawl program made sweeping changes to the management and monitoring of the fishery in response to biological, economic, and social concerns that persisted despite the fishing capacity reduction resulting from the 2003 buyback program, severe trip limit reductions, and the closure of the coastwide trawl rockfish conservation area⁴. Rationalization resulted in significant benefits: large reductions in bycatch and discards; improvements in the timeliness, accuracy, and precision of catch and total mortality accounting; flexibility that allows participants to better integrate west coast groundfish trawling and/or quota trading into their overall portfolio of fisheries; marketing advantages derived from the conservation improvements and sustainability certification; the creation of new asset value in the form of quota share; etc. The impact of these benefits extends throughout the trawl sector and beyond to other fisheries, fishing communities, and the marine ecosystem, through outcomes including lower total mortality of non-target species, reduced risk of exceeding annual catch limits, improved trawl fishery-dependent data inputs for stock assessments, the ability to coordinate the timing of groundfish fishing and landings around other fisheries, processor capacity, etc.

However, transition to rationalization added or expanded numerous requirements of NMFS (discussed further below), and reduced or eliminated very few. The result is a significant overall net increase in agency costs with the trawl program. The Magnuson-Stevens Act (MSA) requires

¹ e.g., <https://www.pcouncil.org/documents/2022/05/april-2022-transcripts.pdf/> and <https://www.pcouncil.org/documents/2022/04/f-2-b-supplemental-gap-report-1.pdf/>

² § 660.115 Trawl fishery - cost recovery program, <https://www.ecfr.gov/current/title-50/chapter-VI/part-660#660.115>

³ Agenda Item G.6.b Cost Recovery Committee Report September 2011, p. 3059 in <https://www.pcouncil.org/documents/2011/09/g-groundfish-management-september-2011.pdf/#page=3059>

⁴ Final Environmental Impact Statement, Rationalization of the Pacific Coast Groundfish Limited Entry Trawl Fishery, June 2010, <https://www.pcouncil.org/documents/2010/06/groundfish-amendment-20-final-environmental-impact-statement.pdf/>

NMFS to recover the actual costs of limited access privilege (LAP) programs⁵, and the NMFS Catch Share Policy⁶ provides guidance to recover “incremental costs, i.e., those costs that would not have been incurred but for the LAP program”. NMFS uses that “but for” standard to determine which tasks are incremental, closely tracks time and cost for those tasks, and calculates cost recovery fees as described in annual cost recovery reports (e.g., G.2.a NMFS Report 1 April 2023).

Non-incremental costs

Non-incremental tasks comprise the majority of NMFS costs related to the trawl fishery. These are tasks and costs that would be necessary without rationalization. The annual cost recovery reports briefly address non-incremental costs; additional information is provided here to help explain what types of costs are non-incremental.

Tasks that would be required regardless of rationalization—i.e., basic functions necessary to understand stock status, prevent overfishing, and provide access to the resource—are not incremental. Tasks related to Endangered Species Act (ESA) obligations are not incremental, consistent with the NMFS Catch Share Policy’s guidance that incremental cost calculation “excludes the costs of managing a resource for the benefit of the public, such as costs for species preservation or biodiversity protection.”

Examples of non-incremental tasks related to the west coast groundfish trawl fishery include:

- The Northwest Fisheries Science Center (NWFSC) groundfish trawl survey
- Stock assessment and associated tasks such as data workshops
- West Coast Region (WCR) groundfish branch staff time working on biennial harvest specifications and intersector allocations
- WCR permits branch staff time issuing/renewing trawl limited entry permits
- NMFS staff time on the Council’s Groundfish Management Team
- NMFS Office of Law Enforcement VMS monitoring relative to closed areas and other spatial regulations
- ESA-related tasks such as development of salmon mitigation measures (implemented in 2021); analysis of salmon bycatch impacts in support of the Council’s consideration of modifying the whiting season start date; reviewing the utility of electronic monitoring to gather information on humpback whale bycatch events (F.1.a Supplemental NMFS Report 2 March 2023)
- Preparation of reports and publications other than those required by the trawl program

With and without comparison

Overall

The NMFS Catch Share Policy states, “Conceptually, measuring [incremental] costs involves a “with and without” comparison of the cost of running the management program for the specified fishery”. The Catch Share Policy was informed by the 2007 NOAA Tech Memo, “Design and Use of Limited Access Privilege Program” (Anderson and Holliday, eds.)⁷, which explains that

⁵ P.L. 109-479, MSA Section 304, <https://media.fisheries.noaa.gov/dam-migration/msa-amended-2007.pdf>

⁶ National Marine Fisheries Service Policy 01-121, 2017 <https://media.fisheries.noaa.gov/dam-migration/01-121.pdf>

⁷ NOAA Technical Memorandum NMFS-F/SPO-86, <https://media.fisheries.noaa.gov/dam->

“The reason for a with-without comparison rather than a before-after comparison is to keep all other factors equal.” This is an important consideration, as many circumstances have changed since trawl program implementation (e.g., stock abundance and rebuilding, changes to the trawl Rockfish Conservation Area and Essential Fish Habitat Conservation Areas, markets and infrastructure, other fishery opportunities), which may affect fishery and management dynamics.

NMFS considered whether and how to attempt a precise, quantitative with-and-without comparison by defining a hypothetical contemporary groundfish trawl fishery without rationalization and calculating estimated costs for direct comparison with the known actual agency costs of the trawl program. Such an effort would be time-intensive and highly uncertain. It would require numerous assumptions about how a non-rationalized fishery would be managed in 2023 and beyond, significant up-front workload by each NMFS program involved in cost recovery, and possibly recurring future effort during annual development of cost recovery fees and NMFS annual report to the Council. This effort—which would itself be an incremental cost—would yield uncertain results that might be subject to debate, and would not be expected to result in any cost reduction for industry or the agency, which NMFS recognizes is the primary interest. Therefore, this report presents a qualitative discussion comparing key management, data collection and analysis, and enforcement tasks with and without the trawl program using only several basic assumptions: that a non-rationalized trawl fishery would be managed with trip limits subject to inseason adjustment, and the non-whiting trawl vessels and whiting mothership catcher vessels would have 25% observer coverage.

Overall, rationalization has added costs by requiring new tasks (e.g., individual quota accounting, catch monitoring), and increasing some that were already occurring (e.g., observer coverage). NMFS’ costs for management, data collection and analysis, and enforcement in the trawl fishery are significantly higher with the trawl program than they would be without, and the program has not resulted in overall net cost savings.

With and without comparison by function

NMFS’ annual cost recovery reports describe incremental tasks and costs by NMFS program (financial management center, or FMC). Here, NMFS offers a more detailed description of differences in example tasks and net cost changes with and without rationalization, grouped by core function. Tasks described below are intended to be representative, not all-inclusive.

Permits & licenses

Work related to issuing/renewing trawl limited entry permits is not incremental for trawl program cost recovery because it would occur regardless of rationalization (i.e., no difference between with/without). Activities and costs related to trawl program-specific permits and licenses (quota share permits and first receiver site licenses) are only required with rationalization and are therefore incremental. The trawl program added new NMFS costs, and did not eliminate or reduce any, related to permit and licenses.

Quota issuance and accounting

The Northwest Fisheries Science Center's (NWFSC) Scientific Data Management (SDM) program provides essential data and IT services in support of the trawl program's requirement to issue and track quota share, quota pounds, and individual bycatch quota in the IFQ sector. Example tasks and costs include designing, developing, maintaining, and testing enhancements to the IFQ database, vessel account system, and online user interface; preparing use cases for developers to evaluate potential system changes and code revisions; testing new functionality before release; performing administrative quota actions in the vessel account system (e.g., QP issuance, top-ups, reapportionment); QA/QC of all system elements and functions; and annual system and server storage space maintenance and licenses. These are new costs required only with rationalization, and they occur on an ongoing annual or ad hoc basis. No costs were reduced or eliminated in this category by the trawl program.

Council participation

NMFS WCR groundfish branch and occasionally other staff incur costs to participate in the Council process for trawl program agenda items. This includes time and travel to attend meetings of the Council, advisory bodies, the public, and necessary discussions with other NMFS staff or external parties, etc. NMFS has charged staff time on incremental tasks to cost recovery since initial implementation of the cost recovery program, and began charging the cost of travel necessary for incremental tasks in 2022. Time and travel for Council participation are frequently only partially incremental as staff work on a mix of incremental and non-incremental topics; in that case, staff track and attribute only the exact time (in 15-minute increments) to sector-specific cost recovery accounting. Time and travel costs for staff at the Assistant Regional Administrator level and above are not charged to cost recovery.

Rationalization added new and complex Council topics that occur only with the trawl program. NMFS staff spend significantly more time on trawl program topics than they would on trip limit adjustments, which would take little to no time by the NMFS Council designee or supporting staff (other than NMFS GMT members, whose time is not incremental; see below). NMFS has not identified any costs in this category that are reduced or eliminated with rationalization.

GMT participation

NMFS staff participate as members of the Council's Groundfish Management Team (GMT). The GMT provides the Council with quantitative analysis and management advice on groundfish fishery topics. Because NMFS staff would participate in GMT meetings with or without the trawl program, NMFS staff time and travel for GMT meetings is not incremental. Therefore, there is no cost difference with or without rationalization.

To elaborate, with the trawl program in place, the GMT analyzes potential changes to program rules, models non-IFQ stocks for attainment and potential trip limit adjustments, monitors and reports to the Council on inseason impacts to overfished stocks and others of interest (e.g., yelloweye rockfish, canary rockfish, shortbelly rockfish, etc.), and analyzes any other topic relevant to management of the groundfish fishery. Without rationalization, the GMT would not have any trawl program measures to analyze and make recommendations on, but would do more inseason tracking, modeling, and reporting to evaluate sector attainment of target and bycatch

stocks and recommend adjustments to trip limits for many more species. No NMFS staff other than GMT members would conduct trawl inseason modeling.

As noted above, although the GMT focuses on different topics with the trawl program than it would without, NMFS staff would participate as members of the GMT regardless of rationalization, and the cost of time/travel for this purpose is not incremental (i.e., no change with vs without).

Policy/technical analysis outside the GMT

NMFS staff conduct policy and data analysis in support of Council actions when needed to supplement work by Council staff and/or the GMT. When the topic is an element of the trawl program, the time spent on that topic is incremental (as noted above, excluding NMFS GMT time). Potential incremental tasks include quantitative analysis/modeling (other than analysis specifically for ESA requirements); evaluation of alternatives for trawl program actions to provide feedback on feasibility, cost, legal or policy concerns, etc.; and more. NMFS staff make every effort to be efficient and minimize time spent on incremental tasks.

Rulemaking

NMFS costs for rulemaking related to trawl program elements are incremental. With the trawl program, actions to modify program provisions require full notice-and-comment rulemaking. That process has many steps, including writing regulations, writing and publishing proposed and final rules, reviewing and responding to comments, compliance with the MSA and other applicable laws and Executive Orders including the ESA, MMPA, NEPA, PRA, RFA, CZMA, EO 12866, and EO 13272.

Without rationalization, it is reasonable to assume there would be more inseason trip limit adjustments per year. Inseason rules are straightforward and require much less staff time compared to the more complex rules required for trawl program actions.

Net rulemaking workload and costs are higher with rationalization than they would be without it, because of substantial new costs and only a small reduction due to fewer or no inseason trip limit adjustments. Attempting to quantitatively estimate and account for the cost of trip limit rulemaking in a non-rationalized fishery would be an incremental time-intensive and uncertain exercise that seems unlikely to produce any substantive benefit to industry.

Communication and participant support

NMFS staff in various branches/programs spend time communicating with industry to answer questions, distribute new information, etc. Time spent on this type of task is only incremental when it is related to a trawl program element, and not when it is related to a non-incremental task.

With the trawl program, time spent preparing written materials (notices, compliance guides, etc.) and communicating with industry members is greater than would be expected without the program due to the more complex regulations and novelty of program changes compared to regular trip limit adjustments. Rationalization has added NMFS costs, and not reduced any, in this category.

Catch accounting - electronic fish tickets

NMFS provides funds to the Pacific States Marine Fisheries Commission (PSMFC) for groundfish trawl electronic fish tickets (e-tickets); this cost is incremental because e-tickets are required by the trawl program. This is a new cost added as a result of the trawl program. There has been only a very small cost savings due to the elimination of entering data from paper fish tickets (data entry was performed by staff responsible for other duties as well, and took only a small fraction of their time). Therefore, there has been no net savings with the transition to electronic fish tickets in the trawl program.

Catch monitor program

The catch monitor program is required by the trawl program and would not exist without it. New costs were added to manage the catch monitor program, train and debrief catch monitors, and QA/QC and report catch monitor data. The trawl program added NMFS costs, and did not reduce or eliminate any, in this category. The additional costs of the catch monitor program are minimized by utilizing the fish species identification training from the observer program to meet catch monitor training requirements.

Observer program

As noted in the GAP's report on cost recovery in April 2022⁸, "Monitoring and data functions existed before catch shares". While the comparison is with/without rather than before/after, the point is clear and NMFS concurs that monitoring and data functions would exist in a contemporary trawl fishery without catch shares. NMFS' costs related to those functions, or portions thereof, that would exist without the trawl program are not incremental, as described below.

The trawl program requires 100% at-sea monitoring for all sectors of the groundfish trawl fishery. Without the program, it is reasonable to assume that 100% monitoring would be required of the whiting mothership processing vessels and catcher-processor vessels in the at-sea whiting sectors, since that level was in place before rationalization. The At-Sea Hake Observation Program (A-SHOP) costs to manage, train, and debrief those observers and manage the data are not incremental. There is no difference in NMFS' costs for at-sea whiting mothership processor and catcher-processor observing with vs. without the trawl program.

The West Coast Groundfish Observer Program (WCGOP) is responsible for overseeing the at-sea observers in the Individual Fishing Quota (IFQ) sector and on the catcher vessels that deliver to motherships (MSCVs) in the at-sea whiting mothership sector. It is reasonable to assume that WCGOP would be providing 25% coverage without the rationalization program, as that is the level in place prior to rationalization. Therefore, only 75% of WCGOP costs related to IFQ and MSCV observing (program management, training, debriefing, data management, reporting, etc.) due to the trawl program, and therefore incremental. Twenty-five percent of WCGOP's costs for this observing is not incremental. The trawl program has added observation costs for the IFQ sector and the MS sector, and has not reduced or eliminated any.

⁸ F.2.b Supplemental GAP Report 1 April 2022, <https://www.pcouncil.org/documents/2022/04/f-2-b-supplemental-gap-report-1.pdf/>

Electronic Monitoring (EM)

NMFS did not recover costs related to the EM exempted fishing permits (EFPs) prior to 2022 because we determined that the investigation of operational feasibility, catch handling practices, and integration of EM data with other data streams that characterized that phase of development supported a national effort by NMFS to modernize and improve fishery-dependent data collection programs through the use of electronic technologies, rather than being primarily a “but for” cost of the west coast groundfish trawl program. In 2022, NMFS began recovering costs related to the new EFPs as their purpose shifted to the exploration of issues specific to the trawl program (further scoping of the industry payment mechanism for video review costs), and to development and implementation of the permanent EM program that is designed to replace the 100 percent human observer coverage necessary for discard monitoring and individual accountability in the trawl program. Electronic monitoring in the trawl program has added to NMFS costs for all sectors of the trawl fishery, and has not reduced or eliminated any NMFS costs.

Economic data collection

The Economic Data Collection (EDC) program is a requirement of the trawl program. Recoverable tasks include administering the mandatory surveys, analysis in support of catch share-related Council actions, data management, and reporting to the Council and its advisory bodies or other groups as requested by the Council. Without rationalization, the EDC program would not exist. There is no cost savings with rationalization.

NMFS notes that information obtained through the EDC was essential in the first trawl program review, data and analysis have contributed to most catch-share related actions, and is currently being used in the ongoing trawl program cost study which is expected to aid in future consideration of potential program changes to reduce costs, and to inform the upcoming second trawl program review (NMFS is not charging cost recovery for the cost study project).

Enforcement

NMFS Office of Law Enforcement (OLE) monitors trawl fishery activity for compliance with trawl program regulations under rationalization, and investigates potential violations. Monitoring of vessel monitoring system (VMS) data for compliance with spatial regulations is not incremental, as those regulations are not part of the trawl program and would exist with or without rationalization. Monitoring and investigating potential violations of quota usage, ownership/control limits and other program rules requires more time than would be necessary for trawl trip limit violations.

Cost recovery administration

Cost recovery administrative tasks are required with the trawl program, and not without it. All programs with incremental tasks are responsible for tracking and reporting incremental costs (time, travel, etc.). In addition, centralized recurring tasks such as the annual cost recovery fee calculation and rulemaking, annual report development and presentation, and disbursement of funds are all added costs. Because this category would not exist without rationalization, there has been no cost savings with the trawl program.

Discussion

NMFS WCR reviewed its process for identifying and calculating the incremental costs of the trawl program, and conducted the qualitative with-and-without comparison of key functions presented in this report. As previously noted, while the trawl program has yielded significant and wide-reaching benefits, lower costs have not been among them. The comprehensive program has added or expanded NMFS responsibilities, and almost no tasks have been eliminated or reduced. The overall result has been a net increase in agency costs, in which the industry shares through cost recovery.

We find that the method described in G.2.a NMFS Report 1 April 2023, which has been used for 10 years since implementation of cost recovery for the trawl program, is consistent with statutory and regulatory cost recovery mandates, guidance in NMFS Catch Share Policy, and the Council's intent in establishing the cost recovery program. NMFS will continue to apply this method in future cost recovery calculations.

The hope is that as a whole the benefits of rationalization, including the conservation and operational improvements, marketing advantages, creation of new quota assets, etc. described at the beginning of this report are of value to the trawl fishery and the nation, and help to offset the costs. NMFS recognizes and shares an interest in seeking cost savings within the program, even with higher net costs overall, and remains committed to continually seeking efficiency in all tasks.

Appendix A

Table 1 summarizes the information presented in the main body of this report in a condensed table format modeled on the structure in the 2011 Trawl Rationalization Cost Recovery Committee report to the Council⁹.

Table 1. Summary of NMFS management, data collection and analysis, and enforcement tasks for the groundfish trawl fishery with and without the trawl rationalization program.

Function	Without the trawl program	With the trawl program	Net cost difference
Permits & licenses	Trawl limited entry permits (LEPs)	Same as “without” plus QS permits, first receiver site licenses, MS and CP co-op permits	New costs added, none reduced or eliminated. No savings with rationalization.
IFQ accounting	None	QS/QP/IBQ issuance/tracking	New costs added, none reduced or eliminated. No savings with rationalization.
Council participation	NMFS designee and supporting staff (except AB members) Council meeting attendance for trawl agenda items such as trip limits and other issues	Same as “without” except including trawl program issues and fewer trip limit adjustments	Time on trawl program changes is much greater than time on trawl trip limit adjustments. New costs added, very little cost reduction. No net savings with rationalization.
GMT participation	In support of all groundfish agenda items, including inseason monitoring of trawl sector attainment and modeling trip limit adjustments	Same as “without”, except including trawl program changes and fewer trip limit adjustments	NMFS staff time on the GMT is the same with or without the trawl program and therefore is not incremental regardless of topic. No difference with vs without rationalization.
Policy/data analysis	In support of groundfish trawl items when necessary to supplement Council staff and GMT analysis. (note trawl inseason analysis/modeling done by GMT).	Same as “without” except including trawl program topics (e.g., gear switching).	New costs added, no identified costs reduced or eliminated. No savings with rationalization.

⁹ Agenda Item G.6.b Cost Recovery Committee Report September 2011, p. 3059 in <https://www.pcouncil.org/documents/2011/09/g-groundfish-management-september-2011.pdf/#page=3059>

Function	Without the trawl program	With the trawl program	Net cost difference
Rulemaking	For all Council action requiring groundfish trawl regulation changes, including inseason trip limit adjustments	Same as “without”, except including full rulemaking processes for trawl program changes and fewer inseason rules to adjust trip limits	Full rulemaking for trawl program changes is much more intensive than inseason rules to adjust trip limits. New costs added, very little cost reduction. No net savings with rationalization.
Communication & participant support	For trawl regulations and Council actions, including inseason trip limit adjustments	Same as “without” except including program rules and fewer inseason trip limit adjustments	Communication on trawl program rules and rule changes is more intensive than on inseason trip limit adjustments. New costs added, very little cost reduction. No net savings with rationalization.
Electronic fish tickets	Fish tickets required, paper allowed.	Electronic fish tickets required.	Trawl program required electronic fish tickets. New cost added, smaller cost reduction due to elimination of paper ticket data entry. No net savings with rationalization.
Logbooks	State requirement in OR & WA; no federal requirement.	Federal requirement; OR & WA state requirements suffice.	No change with vs without rationalization; costs are not incremental.
Catch monitor program	None	Required with trawl program.	New costs added, none reduced or eliminated. No savings with rationalization.
Observers	25% coverage shoreside 100% coverage at-sea	100% coverage IFQ 100% coverage at-sea	Shoreside/IFQ: new costs added, none reduced/eliminated. No savings with rationalization. Only 75% of WCGOP IFQ-related costs are incremental. At-sea: no change with vs without rationalization; costs are not incremental
Electronic monitoring	No requirement	Optional substitute for 100% human observer coverage	New costs added, none reduced or eliminated. No savings with rationalization.
Economic data collection	Voluntary cost & earnings survey of shorebased vessels	New mandatory Economic Data Collection survey of all vessels, including processing-vessels, processors, and quota share owners	New costs added. No net savings with rationalization.

Function	Without the trawl program	With the trawl program	Net cost difference
Enforcement	Monitoring and investigating compliance with trawl regulations including trip limits	Same as “without” except with more complex trawl program rules and fewer trip limits	New costs added, low cost reduction. No net savings with rationalization.
Cost recovery administration	None	Required with the trawl program.	New costs added, no costs reduced or eliminated. No savings with rationalization.