

NMFS Report: EM Cost Estimates
Prepared by NMFS West Coast Regional Office
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At the February 25, 2021 of the Groundfish Electronic Monitoring Policy and Technical Advisory Committees (GEMPAC/GEMTAC), the need for better estimates of the costs of the third party model was discussed. A group of industry members, service providers, Pacific States Marine Fisheries Commission (PSMFC), and NMFS staff volunteered to work together to develop updated estimates of the EM program for consideration by the Council. Participants included: Heather Mann (Midwater Trawlers Cooperative), Melissa Mahoney (Environmental Defense Fund), Amanda Barney (TeemFish), Mike Orcutt (Archipelago), Stacey Hansen (Saltwater Inc.), Jacob Isaac-Lowry (FlyWire), Dave Colpo (PSMFC), and Melissa Hooper (NMFS). This report describes those updated cost estimates.

Table 1. Estimate of observer, EM EFP, and third party program costs

	Observer	EFP	Third Party (Mean)	Third Party (Median)
NMFS Costs				
WCR		\$202,345	\$202,345	\$202,345
NWFSC	\$366,000		\$378,000	\$378,000
PSMFC		\$435,000		
Recovered via cost recovery	-\$190,630		-\$210,286	-\$210,286
NMFS Subtotal	\$175,370	\$637,345	\$370,059	\$370,059
Industry Costs				
Observer sea days	\$1,362,900			
Equipment, field services		\$481,500	\$334,808	\$317,483
Video review, storage, reporting			\$253,307	\$229,752
Cost recovery	\$190,630		\$210,286	\$210,286
Industry Subtotal	\$1,553,530	\$481,500	\$798,401	\$757,521
Program Total	\$1,728,900	\$1,118,845	\$1,168,460	\$1,127,580

Methods

Observer

- The “Observer” column contains NMFS’s estimates of the costs of 100-percent observer coverage for the EM EFP fleet, if these vessels returned to using observers on all trips.
- NWFSC costs are the difference in WCGOP’s recoverable costs for administration of the catch share observer program before (annual average 2013-2015) and during the EM EFP (2018-2020). The difference is being used as an estimate of the WCGOP’s costs to

administer seadays associated with the EM EFP fleet when they were using observers full time.

- “Recovered via cost recovery” is NMFS’s estimate of the amount of its costs that it would be able to recover through cost recovery fees (max 3%). This field was added to address comments from industry members that the total NMFS costs and industry costs should reflect the redistribution of this cost to industry. Thus, the recoverable amount is shown as a credit in the NMFS portion of the table, and a cost in the industry portion.
- “Observer sea days” is NMFS’s estimate of the cost of observer coverage if the EM EFP fleet returned to using observers full time with an equivalent amount of effort, assuming 2,596 seadays and a seaday rate of \$525 per day. The observer seaday rate was estimated based on the average cost reported to the Economic Data Collection Program 2015-2019 and feedback from observer providers.

EFP

- The “EFP” column contains NMFS’s estimates of the costs of the current EM EFP, including NMFS’s administration costs, PSMFC’s data services costs, and industry’s equipment and field services costs.
- The WCR cost includes \$150,000 in labor to prepare and review EFPs and vessel monitoring plans, and to follow-up on drive reports and compliance issues, and \$52,345 for maintenance of the drive report database. The drive report database has been developed and if the EFP continues NMFS intends to deploy it. The \$52,345 includes an estimate of labor to annually maintain the database if it was in use.
- PSMFC costs are an annual average of funding NMFS provided to PSMFC through the EM grant from 2015-2021 to provide data services for the EM EFP.
- “Equipment, field services” is taken from EFP participant’s report of equipment and field services costs at the February 25, 2021 GEMPAC meeting. This includes an estimate of includes an estimate of \$288,000 for the program fee, \$87,500 in vessel service visits, \$10,000 in postage for hard drives, and \$96,000 annually for equipment (EM unit purchase amortized over 5 years). The annual program fee covers technical support, program coordination, VMP creation and management, and equipment management (replacement parts, etc.). Vessel service visits include labor and travel for actual service visits. The annual equipment cost may be an overestimate, because EM units often last longer than 5 years, even up to 10 years. Therefore, an amortization of equipment costs over 5 years may underrepresent the lifetime of EM units and overestimate annual equipment costs.
- NMFS does not charge any costs from administering the EM EFP program to cost recovery, so a cost recovery fee value is not provided.

Third Party

- The “Third Party” columns show estimated costs to NMFS and industry from an EM program that uses industry-funded, third party providers for data services (video review, storage, and reporting).
- WCR costs are the same as those shown in the EFP column. NWFSC costs include all WCGOP labor costs, including \$150,000 in staff time to conduct the secondary review and process data and upload it to the vessel account system, and \$228,000 for databases.

Database costs are expected to decline over time as the program matures and tasks transition from development to maintenance.

- “Recovered via cost recovery” shows NMFS’s estimate of the portion of its costs that it would be able to recover through cost recovery (max 3%).
- 4 EM service providers produced estimates of costs for equipment, field services, and data services (video review, storage, and reporting). NMFS aggregated individual provider’s estimates to maintain their confidentiality. Table 1 contains the mean and median of the 4 estimates.
- “Equipment, field services” generally includes the cost of equipment (amortized to an annual cost); program fees for technical support, program coordination, VMP creation and management, and equipment management (replacement parts, etc.); and travel and labor for service visits. The annual equipment cost may be an overestimate, because EM units often last longer than 5 years, even up to 10 years. Therefore, an amortization of equipment costs over 5 years may underrepresent the lifetime of EM units and overestimate annual equipment costs.
- “Video review, storage, reporting” generally includes labor to review the video, data enter logbooks, report data to NMFS, and data storage costs. Most providers assumed 100% review of whiting and MSCV trips, and 25% review of bottom trawl and fixed gear trips. Some providers attempted to account for additional review triggered by trips not passing the logbook-to-EM comparison.
- As described above, the “Cost recovery” field shows NMFS’s estimate of the portion of its costs that it expects to be able to recover through cost recovery, shown as a cost for industry.

Table 2. Estimate change to cost recovery fees from EM

Sector	Share of EM Costs	NMFS EM Costs	Pre-EM DPC	Post-EM DPC	2018 Ex-vessel Value	Pre-EM Fee	Post-EM Fee	Difference	Cost Difference
Shorebased IFQ	75%	\$435,259	\$1,576,294.00	\$2,011,552.96	\$54,795,365.00	2.88%	3% (3.67%)	0.12% (0.79%)	\$65,754.44
Mothership	25%	\$145,086	\$33,232.92	\$178,319.24	\$11,562,542.83	0.29%	1.54%	1.25%	\$144,531.79

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- Table 2 shows NMFS’s estimate of how cost recovery fees would change when NMFS’s costs to administer the EM program are added.
- NMFS apportions its EM costs 75% to the IFQ sector and 25% to the mothership (MS) sector, based on the average proportion of seadays fished by each sector in the EM EFP.
- Pre-EM DPC for MS, 2018 Ex-vessel value, and Pre-EM fee for MS taken from the April 2020 Trawl Rationalization Program Annual Cost Recovery Report: <https://www.pcouncil.org/documents/2020/06/supplemental-informational-report-14-trawl-rationalization-program-cost-recovery-annual-report-fee-calculation-for-2020-and-fishing-year-2019-payments-april-2020.pdf/>
- Pre-EM DPC and Pre-EM fee for IFQ taken from 2020 cost recovery fee correction notice published June 16, 2020 (85 FR 36379): <https://www.federalregister.gov/documents/2020/06/16/2020-12891/magnuson-stevens-act-provisions-fisheries-off-west-coast-states-pacific-coast-groundfish-fishery>
- Pre-EM DPC and pre-EM fee for MS reflect credits for errors and litigation that are not expected to be repeated in future years and, therefore, may underestimate recoverable costs for this sector.