

Electronic Monitoring Workgroup - Minutes

March 28-29, 2017, Best Western, Kodiak, AK

Workgroup: Bill Tweit (chair)

Appointed: Dan Falvey (ALFA), Howard McElderry (AMR), Abby Turner (NPFA), Nancy Munro (SWI), Jeff Stephan (UFMA)

Agency: Council – Diana Evans, Sam Cunningham; NMFS FMA Observer Program – Mike Vechter (phone), Lisa Thompson (phone), Craig Faunce (phone), Mona Ash (phone); NMFS Alaska Region – Jennifer Mondragon, Jennifer Watson, Gretchen Harrington; NOAA Office of Law Enforcement – Brent Pristas, Guy Holt; NOAA General Counsel – Tom Meyer (phone), Alisha Falberg (Enforcement - phone); Pacific States Marine Fisheries Commission – Courtney Donovan (phone), Aileen Smith (phone); IPHC – Claude Dykstra

Others attending included: Alan Perzanowski (SWI), Mike Orcutt (AMR-phone), Megan Smith (AIS), Luke Szymanski (AIS)

The Chair opened the meeting with introductions and a discussion of the agenda.

Update on 2017 pre-implementation

Mike Vechter (FMA) provided an update on the 2017 pre-implementation program to date. Of the 91 total vessels registered in the EM selection pool, 74 vessels have had EM systems installed. Overall, the program seems to be functioning well.

EM budget

Lisa Thompson (FMA) updated the Workgroup on the status of the 2017 EM budget. She highlighted that the agency has requested \$585,000 from headquarters to support the EM operational program in 2018, but NMFS' budget is still unknown. Given the probability of less funding available, it would be good to consider using carryover fees from 2017 to support 2018. Funding is also needed to support the program in the first half of 2019, until the fees from 2018 are collected and available to fund an EM contract.

Longline vessels

Dane McFaddon (AMR) reported that they have completed installations on 58 vessels, in ports across Alaska. To date, sharing control boxes among vessels has not been a problem. He noted that the opt-in time period in 2016 gave them very little time to get all the requisite installations and skipper training accomplished for vessels new to the EM pool, especially for vessels that began fishing on January 1st, and he is working to do more in-person outreach in the main ports ahead of time in future.

Jennifer Mondragon raised an issue that has come up this year regarding documentation of whale depredation. The Workgroup discussed how best to gather information from the EM pool about whether whales are present (which cannot be detected on video, so would need to be logged by skippers), and whether there is depredation on the fish (which may be possible to detect on video, but could require a separate damage category). Jennifer will organize a teleconference to agree on a protocol.

Pot vessels

Eleven pot vessels in the EM pool had systems installed by Saltwater, and 5 by AMR. Data was collected during the pot cod fishery from Jan 1-Feb 23. The providers reported that there has been resistance from vessels about pot catch handling protocols, as the VMP currently requires the crew to completely clear the sorting table before dumping the next pot, which is not the current practice for all vessels. The Workgroup discussed that it is worth having a discussion to see whether there might be different protocols that would still meet the agency objective to know the retained and discarded catch from each pot. Jennifer Mondragon will organize a follow-up teleconference with industry members and providers.

Jennifer also noted that when EM vessels are delivering to tenders, there is a long time-lag before their data is available to catch accounting. The Workgroup discussed the pros and cons of having vessels give the hard drives in pre-paid mailers to the tender vessels to mail from shore.

Video review & data transmission

Courtney Donovan informed the Workgroup that 27 of the 29 pot and longline trips from AMR vessels this year have been reviewed. PSMFC will also be reviewing the Saltwater vessel EM data, but is waiting for updated software to review the 25 trips from Saltwater vessels. As part of their NFWF grant, Saltwater is testing a cost effectiveness model by having their field technicians also do video review of EM data from their pot vessels. Saltwater has started reviewing the data from the early pot cod season. Nancy Munro reported that the process of defining data fields to match with the AFSC's observer database and developing data transmission methods has been complicated, but there has been good progress. NMFS anticipates that both Saltwater and PSMFC will be able to transmit data to the AFSC on a regular basis, in the near future.

Evaluation of 2016 EM pre-implementation program

Aileen Smith (PSMFC) briefed the Workgroup on the final PSMFC 2016 report, which was appreciated, and much of which was included in the EM Integration analysis. **The Workgroup would like some of the report metrics to be included in Observer Annual Reports, especially those that track data quality and system performance.** Jennifer Mondragon and Diana Evans will pull something together to include in the descriptive statistics section (Chapter 4) of the Annual Report. The Workgroup also discussed halibut condition factors, and whether it is possible through the video review to capture a ratio of legal/sublegal halibut discarded. Similar efforts are already underway for observers, and the IPHC will work with NMFS to assess how those efforts might be able to be applied to EM.

Sam Cunningham and Howard McElderry provided a summary of 2016 EM costs. Video review costs from PSMFC were approximately \$40,000, with the target fishery influencing review time. The total EM deployment cost in 2016 was \$484,167, which included significant equipment purchase in addition to 2016 operational costs. Howard categorized cost areas between one-time expenses (as with a pilot program), amortized costs (for infrastructure, equipment, and capacity building, where the benefit extends over several years, and the cost is proportioned among each of those years), and recurrent costs. On this basis, the cost of an ongoing program similar to the 2016 field program would be approximately \$200,000/year. Based on the number of sea days in 2016 (357), this would result in an average sea day rate of \$565, or \$677 per day with video review included. **The Workgroup appreciated the cost exercise, and recommended that 2016 costs and a similar costing approach be included in the Annual Report.** Howard noted that in future years, the costs should be reported as service areas (program coordination, equipment services, field services, data services) rather than expense categories (labor, equipment, travel).

Craig Faunce briefed the group on how he and the Observer Science Committee are evaluating the 2016 EM pool, for the deployment review in the Annual Report (Chapter 3). He will consider how many EM trips were successfully observed on selected vessels, and compare how many vessels were anticipated to be fishing versus how many did fish, which will mirror the vessel selection strata analysis in the past.

Planning for observer and EM program integration

Sam Cunningham and Craig Faunce led a lengthy Workgroup discussion about the types of cost factors that are needed in order to be able to accurately predict costs for the EM pool in future years, when the observer fee will need to be divided between the human observer and EM pools. The cost of EM is fundamentally different from human observers, where the cost is largely driven by at-sea days. For EM, there are different cost drivers, and once the EM system is onboard, the additional at-sea cost (not including video review) of collecting data from more sea days is marginal. Major categories are the cost

to buy the system, the cost to install/remove it, the cost to service/swap out systems, and baseline costs for field service and program administration. Many of these costs are proprietary business information, which complicates the cost modeling effort. There is also a cost for video review, which based on PSFMC data seems generally more straightforward to calculate, taking into account the variance in review time by fishery and likely gear type (although our current assumption is that that video review costs will be borne by the agency rather than coming out of the observer fee).

The Workgroup noted that costs will likely change in a contract environment, and discussed whether the actual costs of the previous year, scaled to the predicted size of the EM pool in the upcoming year, would be a sufficient proxy for EM costs. Such a point estimate would not be able to capture variability in program costs due to implementation and operational efficiencies that accrue over time, or changes in the EM deployment model. Instead, **the Workgroup agreed that Sam (and Craig, to the extent that he has time) should work with the EM providers to put together a list of cost categories, and also to come up with a high/low range of costs for specific services.** This information should be provided to Craig by mid-June, so that he can work on a preliminary description of how he would analyze splitting out the fee through simulation modeling. The Workgroup also suggested that in addition to tracking the list of vessels that have systems and control boxes currently installed, it would also be helpful to include a log of when installs or removals occur inseason, and when field service visits or technical follow-up (such as modifying VMPs) are required. The actual 2017 program costs could be used at the end of the year to groundtruth how accurately costs were predicted.

Recommendation for 2018 ADP

The Workgroup discussed EM deployment in 2018. In future years, when the EM pool is fully integrated into the Observer Program, the process for the Council to provide any recommendations to the agency on EM deployment will be at the June Council meeting, in conjunction with review of the Annual Report. For the upcoming year, **the Workgroup generally recommends a similar EM deployment in 2018 as 2017: deployment using trip selection, for longline and pot vessels of any size, at a 30% selection rate, with EM service in major ports** (Sitka, Homer, and Kodiak for longline, and Homer, Kodiak, and Sand Point for pot) **and other ports limited to remote support** or periodically-scheduled visits by primary port technicians, as funding permits. **The Workgroup also recommends that the size of the EM pool grow in 2018, to accommodate up to 120 longline vessels, and up to 45 pot vessels,** assuming there is funding to support that size. This would be an increase from the 90 longline vessels and 30 pot vessels that were planned for in 2017. Workgroup members indicated that additional vessels are interested in joining the EM pool in 2018, and there is an advantage to using pre-integration funds to purchase equipment for EM pool vessels before 2019, when funding for the program will come out of the observer fee. The Workgroup acknowledged that the agency's current EM funding request for 2018 does not accommodate an expanded EM pool, but a subgroup will meet to discuss the amount of supplemental funding that would be needed, and investigate possible sources of funding (such as NFWF). It was noted that the timing of the opt-in period for 2018, which cannot begin until the final rule is published, and the requirement for everyone currently in the EM pool to opt-in again, will be a challenge for vessels, but this cannot be avoided.

Briefing on timing and development of EM and Observer contracts for 2019

Lisa Thompson and Mona Ash briefed the Workgroup on the proposed schedule for developing the EM contract and renewing the partial coverage observer contract (which NMFS is considering packaging together). The Observer Program met with the NOAA Acquisition and Grants Office (AGO) recently, to discuss milestones and how to accommodate the Council's interest in providing input into the development of the RFP. The proposed schedule is as follows:

- May 24, 2017 – AGO will attend the OAC meeting, propose their plan for incorporating input on the development of the contract RFP, and get feedback

- May-September – FMA will prepare a draft Statement of Work for the contract
- end September/beginning October – AGO is planning an “Industry Week” (publicized in the Federal Register and on FedBizOpps), where they will try to solicit input from as many industry members as possible on the draft Statement of Work. They are willing to travel to Alaska ports, and overlap their visit with the Council meeting. All questions that are put to them at the outreach meetings will be published as Questions and Answers.
- Post-Oct 2017 – AGO will work with FMA to incorporate public input into a final Statement of Work, and released with the final RFP in Spring 2018 with the intent to have the contract awarded by early 2019.

The Workgroup appreciates the flexibility the AGO and the Observer Program have demonstrated in trying to accommodate the Council’s interest in providing input on the contract(s). The Workgroup had several questions about how industry week would work, where meetings would be, and how to design it to meet people effectively. Other questions focused on how the statement of work will identify milestones and timeframes (e.g. for installing/removing equipment), and how that affects costing; how it will accommodate or encourage technical innovation; whether it will allow for multiple contracts and/or multiple EM awards within the contract; and if the contract begins in mid-June 2019, how a potential transition to a different provider would be accommodated mid-fishing season. Lisa indicated that these questions should be directed to AGO representatives at the May OAC meeting. EMWG members can either provide their questions to Diana or Bill, or may participate directly in the meeting, which will be teleconferenced.

EM Integration - Proposed Rule

Gretchen Harrington and Jennifer Watson presented the various sections of the proposed rule to integrate EM as part of the Observer Program. **The Workgroup appreciates the quality of the proposed rule, and the staff work that was required to have it published quickly.** The proposed rule also does a good job of capturing a flexible program, as envisioned by the Workgroup, through the use of the Annual Deployment Plan and Vessel Monitoring Plans. **The Workgroup highlighted the following areas of the proposed rule, and recommends that they be revised or further considered before the final rule is published.** NMFS clarified that in order to be considered, these comments need to be formally submitted at regulations.gov, either in a letter from the Council or as comments from individuals or organizations.

- 679.51(f)(5)(iii) and 679.7(g)(2) state that to use an EM system, the vessel must have the approved VMP onboard while fishing. However, this should be clarified so that the VMP is only required onboard when the vessel is fishing in fisheries that are subject to observer regulations, and not, for example, when fishing in state fisheries. A vessel may reconfigure their boat, for example in salmon fisheries, in which case it could be out of compliance with the VMP.
- 679.7(g)(9) states that vessels may not tamper with or disconnect the EM system. There should be some provision in the regulations or the VMP to accommodate deck reconfiguration (for example, for participation in salmon fisheries) or vessel repairs without triggering a violation.
- 679.2 definition of a “fishing trip,” paragraph (3)(iv), defines an EM trip as beginning and ending in a shore port. This means that when vessels are delivering to a tender, their “fishing trip” for purposes of being selected for EM coverage may include multiple deliveries to a tender. It is possible to get an EM hard drive mailed mid-trip, while the vessel is delivering to a tender, which would result in more timely data. The Workgroup recommends changing this definition for vessels in the EM selection pool so that a fishing trip begins with an empty hold and ends when all fish are delivered.
- 679.51(f)(2)(i) states that vessels must register their anticipated trip in ODDS a minimum of 72 hours prior to embarking on the fishing trip. The Workgroup believes this requirement, a legacy of the human observer ODDS regulations, is unnecessary for EM. The regulations separately

specify the conditions that must be met for EM vessels to leave on an EM-selected trip, and as long as these are clear, the additional 72-hour notice requirement seems unnecessary and onerous.

- 679.51(f)(6)(iv) states that when a vessel is fishing IFQ in multiple areas, the vessel must cease fishing and contact OLE immediately if an EM system malfunction occurs during a fishing trip. If a vessel is unable to contact OLE (for example, because they are not in range of communication), the regulations or the VMP should clarify that the vessel is not required to abandon their gear before proceeding to a location from which they can contact OLE. Also, the VMP template should include information on the ways to contact OLE.
- page 14857, column 3, paragraph 2 – the preamble language states that vessels can use an EM system if it is already onboard to meet the specifications in the VMP. It should be clarified that the system must also meet the specifications required in the observer provider contract for data quality and specificity of data output.

The Workgroup also discussed three other areas of the rule without reaching consensus that these requirements should be changed.

- 679.51(f)(3)(ii) (and tangentially 679.51(f)(5)(vii)) requires vessel operators to a) close their EM-selected trip in ODDS and b) close the trip within 24 hours of the end of the fishing trip. The proposed rule links the closure of a trip in ODDS with instructions to send in the hard drive with EM data. While the EM Workgroup did not oppose requiring vessels to close their trips in ODDS, some members raised concerns about the 24-hour time requirement. This would represent a difference from regulations for the human observer pool, where there is currently no explicit requirement for closing your trip. It was noted that the 24-hour timeframe is inconsistent with the current practice of some vessel operators to go out on a couple of trips before doing their 'book-keeping' in ODDS to close out and log new trips, and that it would help to have some consideration of the pros and cons of, for example, a 24-hour versus a 48-hour time requirement. At the same time, a short timeframe for closing the trip would allow flexibility in the future for vessels to be selected after the trip for submitting their EM data, rather than before. One suggestion would be to remove this element from the proposed rule, and instead address the timing of closing out trips in ODDS comprehensively across partial coverage.
- 679.51(f)(5)(vii) requires hard drives on EM-selected trips be postmarked no later than 2 business days after the end of the fishing trip. The Workgroup agrees with the principle that data needs to get to the agency as quickly as possible, but the discussion focused on how to accommodate the postmarking requirement in ports that have very limited post office hours, and no resident postmaster. Some members of the Workgroup felt strongly that the timeframe for submitting hard drives should be included in the VMP, rather than in the regulations.
- 679.51(f)(4)(i) states that vessel owners are required annually to sign and submit their VMPs, even if nothing in the VMP has changed. This requirement is in part to accommodate the potential that the VMP template may change from year to year, for example as a result of different priorities in the ADP, and also because the annual approval is the opportunity for the agency to disapprove the VMP of vessels that are consistently not following the requirements of their VMP. Members of the Workgroup were concerned about the burden on vessels, providers, and the agency of signing, submitting, and approving potentially 165 VMPs annually, especially when the VMPs do not change, and would like to see an expedited mechanism to accomplish this if it remains in the final rule.

Vessel monitoring plan template

Jennifer Mondragon and Jennifer Watson presented the VMP template as updated for 2017, and a draft malfunction matrix that they have developed to help vessels identify what their response should be to EM malfunctions before they leave port, during a trip, and when IFQ fishing in multiple areas. The Workgroup noted that a vessel is not able to check for lighting malfunctions pre-departure, and in general

these are likely to be discovered only by the video reviewers. Also, in future it will be useful to think about whether the program should furnish spare sensors to the vessel, especially in situations such as IFQ fishing in multiple areas, where a vessel must cease fishing if the equipment is not working. The matrix will eventually be folded into the VMP template. Tom Meyer noted it is important to make sure that the VMP is written clearly and unambiguously by the providers.

Research and Development

Mike Vechter briefed the Workgroup on the deployment schedule for stereo cameras in 2017, which will be installed on 2 longline vessels. The stereo cameras will also be installed on IPHC survey vessels, with experimental gear enumeration sensors. For EM lite, one vessel had the system installed in February, and after initial software issues, has successfully been collecting data. Additionally, chute stereo cameras are being tested in 2017 in the trawl fleet for halibut bycatch monitoring and for the halibut deck sorting EFP.

In order to test real-time transmission of EM systems status data, as has been requested by NMFS Enforcement, satellite modems will be installed on two vessels in 2017. Once they are installed, AMR will contact Brent Pristas and others to install the health data viewer. The Workgroup discussed how the data would be used for management or enforcement needs, and whether it would be shared, for example, with the Coast Guard and the State of Alaska. For EM providers, real time transmission could be useful for resolving technical problems especially on vessels that are fishing in areas where it is expensive to send a technician. The Workgroup will track the costs of using the satellite modems in 2017.

Dane McFadden (AMR) also reported that they are testing a new mechanism for triggering the seabird cameras, namely a tory line tension device, as well as a new sleep sensor. The existing sleep sensor evaluates engine oil pressure, and skippers have been reluctant to drill into the engine block to use it. AMR is testing a new sensor that detects current from the alternator, to toggle sleep mode on the system.

Scheduling and other business

- An informal discussion will take place at the April Council meeting to clarify the NMFS budget request amount, consider how to estimate the funding needed to support an expanded EM pool in 2018, and discuss the possibility of supplemental funding through a NFWF or other grant.
- The EMWG cost subgroup will assemble cost information by May, in order to give Craig Faunce data for his discussion paper that will begin to develop tools to apportion the fee between the EM and Observer pools, scheduled for Council review in October.
- May 24, 2017 – EMWG members may participate in the AGO presentation on the EM/Observer contract, at the OAC meeting
- Schedule a September EMWG meeting in conjunction with the OAC, to review the 2018 ADP and EM deployment plan, and the EM/Observer integration paper.

The Workgroup discussed their continuing role as the program transitions to an integrated EM/Observer program. The Council did not create the EMWG as a standing committee, and some of the advisory responsibilities would seem to transition naturally to the Observer Advisory Committee, perhaps with some expanded membership. At the same time, at least in these early days of implementation, the program benefits from having the EMWG's help to address the logistical issues that come up with respect to EM implementation. A resolution on the EMWG's continuing role is not immediately necessary, as EM integration will continue over the next couple of years. The Workgroup members will continue to discuss. At some time before the EMWG eventually disbands, however, it would be useful to schedule a discussion about how to apply the lessons learned from fixed gear EM implementation to other sectors, such as <40 foot fixed gear vessels or trawl vessels.

Several Workgroup members were slated to participate in an outreach panel at ComFish on March 30, 2017, addressing where EM is headed in the next 3 to 4 years.