

Electronic Monitoring Workgroup - Minutes

September 18, 2017, 9am-5pm,
Observer Training Room, Building 4, AFSC, Seattle, WA

Workgroup: Bill Tweit (chair)

Appointed: Dan Falvey (ALFA), Howard McElderry (AMR), Malcolm Milne (NPFA – phone), Abigail Turner (NPFA - alternate), Nancy Munro (SWI - phone), Jeff Stephan (UFMA - phone)

Agency: Council – Diana Evans, Sam Cunningham; NMFS FMA Observer Program – Chris Rilling, Mike Vechter, Farron Wallace, Braden Moore, Suzanne Romain; NMFS Alaska Region – Jennifer Mondragon; NOAA Office of Law Enforcement – Brent Pristas (phone), Guy Holt (phone); NOAA General Counsel – Tom Meyer, Alisha Falberg (Enforcement); Pacific States Marine Fisheries Commission – Dave Colpo, Courtney Paiva, Jennifer Cahalan; IPHC – Claude Dykstra; AFSC – Shannon Fitzgerald; ADFG – Trent Hartill, NMFS NWR - Justin Cavanaugh, Matt Dunlap

Others attending included: Mike Orcutt (AMR), Luke Szymanski (AIS), Ernie Weiss (AEB), Ruth Christensen (UCB), Julie Bonney (Groundfish Databank), Dane McFaddon (AMR – phone), Alan Perzanowski (SWI - phone)

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

EM budget for 2017 and 2018

Chris Rilling (NMFS FMA) updated the Workgroup on the status of the 2017 EM budget. In a handout, he provided information on the amount of carryover funds expected from the various funding sources in 2017, and new funding from NMFS for 2018. Taking into account the remaining expenditures expected through the end of the year, he anticipates the 2018 budget to be approximately \$1 million, which is the amount evaluated in the 2018 Annual Deployment Plan (ADP). Chris also highlighted that funding is 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. He has made a funding request to NMFS headquarters in the amount of \$485,000. Chris also noted that both Dan Falvey, on behalf of ALFA, and NPFA and Saltwater, have submitted NFWF proposals for additional funding through mid-2019 to support additional vessels in the EM selection pool up to the Council's desired maximum of 165 vessels (120 longline and 45 pot).

Update on 2017 pre-implementation

Mike Vechter (NMFS FMA) provided an update on the 2017 pre-implementation program to date. 80 vessels in the EM selection have logged trips in ODDS in 2017, of which 66 have been selected for and completed EM trips. Of the 572 total logged EM trips, 160 have been selected for coverage (28%). 16 vessels that opted in to the EM pool at the beginning of the year did not fish with EM in 2017; 3 of those vessels chose to return to the observer pool. Of the others, some did not fish because the vessel was in the process of being sold, or because the skipper was injured. Of the 80 vessels, 62 fished with longline gear only; 7 with pot gear only; and 11 vessels fished both longline and pot gear. The most time-consuming part of switching between gear types is setting up a hauler camera for the longline boats for vessels that do not have a pre-existing mounting pole, or removing and replacing cameras in the spring and fall for vessels that seine in the summer. With forethought at initial installation, however, these transitions can be accommodated more easily with quick connections. Overall, the EM strata worked well for a pre-implementation year, and the lessons learned have been applied to implementation in 2018.

Mike Orcutt and Howard McElderry (AMR) provided an update on the 75 vessels that are being serviced by AMR, and reported that they have completed installations on 73 vessels, in 10 different ports across Alaska and two in Washington. In addition to installations, they provided 84 non-installation services, including moving control boxes among vessels, making camera adjustments, and data retrievals, in 7

different ports (of which half occurred in Sitka). In general, it took about an hour to install a control box, and about 2-2.5 hours to reconfigure a vessel coming from another fishery (such as seining).

Nancy Munro (Saltwater, Inc.) reported on the 11 pot vessels in the EM pool that have systems installed by Saltwater in 2017, of which 9 also fished with longline gear in the spring and summer. Remote servicing for these vessels has been working well. Both EM service providers reported that skippers are beginning to use their systems for their own purposes as well, to monitor the deck from the wheelhouse, and improve safety. It was noted, however, that there is currently a one or two second delay in the display, which is limiting for some captains.

Mike also provided an update on the testing of real-time transmission of EM systems health status data. Two vessels had satellite modems installed for a total of three trips in 2017. The test was successful, and Mike briefed NMFS OLE and others on the data viewer. In order for the data to be useful, however, it needs to be translated from its raw form into some kind of automated report. There seems to be potential utility especially for vessels fishing IFQ in multiple areas with respect to reporting the functionality of the system and where vessels are fishing, but a reporting interface is needed to make it useful.

Courtney Paiva (PSMFC) informed the Workgroup that PSMFC has prioritized the West Coast programs' data review this year over Alaska, as the data are not being used in catch accounting. They have reviewed a quarter of AMR's longline trips, and all pot cod trips, though not the 2 sablefish longline pot trips. She has completed review of only 2 of the Saltwater pot cod trips, and none of the longline. For the AMR trips, the review time is similar to previous years. The Workgroup asked how Alaska trips will be prioritized for review next year, and Jennifer indicated that timeliness will be critical for the longline cod fishery, but there may be options to subsample the halibut trips at first, to keep abreast of bycatch monitoring inseason while the full review is completed on a less urgent timeframe.

Update on EM final rule

Jennifer Mondragon (NMFS AKR) updated the Workgroup on the agency's response to comments on the proposed rule, which were recommended by the Workgroup and submitted by the Council. The agency agreed with all comments submitted by the Council.

EM selection pool in 2018

Vessels opting in to the EM stratum for 2018

NMFS sent letters to 630 vessels in partial coverage in mid-August, notifying them of the need to opt in to the EM selection pool by November 1st, even if they have been in EM in previous years. This is a hard deadline, and no vessels will be accepted into the pool after that date, nor will vessels be allowed to opt out and go back to the observer pool. At the time of the EM Workgroup meeting, 63 vessels had requested to be in the 2018 EM pool¹. The Observer Program has made a lot of programming changes to accommodate a user interface for opting in and incorporating an EM strata for 2018, and also to create an EM provider interface as part of ODDS.

The Workgroup discussed the policy for 2018 that if a vessel is doing trawl at any point of the year, it is not eligible to be in the EM selection pool (i.e., a vessel must be entirely in either EM or the observer pool for the entire 2018 fishing year). This requirement derives from the need to get a working ODDS program ready for 2018 implementation; Jennifer Mondragon and Chris clarified that it could be possible in future to reprogram ODDS to allow trawlers to switch between monitoring types when fishing with fixed gear. Industry members were concerned that this requirement especially excludes Sand Point vessels that fish pots and trawl from being able to use EM, which may be a more cost-effective use of the observer fee

¹ As of 9/27/2017, the number was 77.

given travel costs. **The Workgroup recommends that a task, to reprogram ODDS to allow vessels to be in the EM pool for fixed gear and the observer pool for trawl gear in the same year, be added to the observer analytical priorities list.** The Workgroup noted that they could not assess the relative priority of this task without first understanding its logistical complexity, and requested the agency consider how much work would be involved.

2018 Annual Deployment Plan

Jennifer Mondragon reported that this is the first year that EM is built directly into the ADP. The ADP identifies the opt-in date for EM vessels, and how trip selection will be used for the EM selection pool in 2018. The ADP also provides criteria for how the EM pool will be chosen if more vessels opt in than funding allows. In response to a question from the Workgroup, she highlighted what the pre-implementation objectives are for pot vessels in 2018 (refining catch handling procedures, refining video review details, and developing estimation procedures for the Catch Accounting System), and noted that they would be added to the final 2018 ADP. She also noted that pot and longline vessels will be in the same stratum for EM, because they have the same selection probability. **The Workgroup recommended that while there might be a single EM stratum for deployment, the Annual Report should distinguish between pot and longline EM vessels in order to understand how operational characteristics may affect data quality.** Although the Workgroup acknowledged that it may not be possible to do the full monitoring bias review for the small number of EM pot vessels.

Jennifer highlighted a statement on page 11 that NMFS intends to implement a post-trip selection period in 2019, where all vessels will be required to record all of their trips, and upon their return ODDS will select whether the trip data should be submitted for video review. She explained that the Alaska program is getting very strong direction from NMFS headquarters to make this change, in order to eliminate any opportunity for the observer effect. She also highlighted some logistical issues that need to be resolved with reusing the hard drives, because currently the vessel is unable to overwrite the drives in order to avoid tampering, but there may be cost and confusion if vessels need to send all the drives to different places. **Industry members of the Workgroup had significant concerns about announcing major changes to the program through the ADP, rather than fully evaluating them in the Council process.** It was noted that at least for pot vessels, catch handling practices change when the vessel is operating with EM, because the sorting table needs to be entirely cleared between each pot dump which slows down retrievals. It was also noted that there will be cost implications from having to resolve any technical issues with the EM system before every fishing trip, rather than before every selected trip, and that these costs will be both for the service provider and potentially lost fishing time for the vessel. There was also pushback on the need for this change in order to address monitoring bias; the Workgroup was concerned that EM vessels were being held to a much higher standard than observed vessels, when they already carry twice the coverage and there have been no evaluations to date to show whether bias is currently occurring. Industry representatives expressed low confidence in the likelihood of vessels volunteering to be in a 100% EM selection program when the alternative is a 15% selection rate for a human observer.

Jennifer noted that it would be helpful to gather information to explain why this change is problematic. **The Workgroup recommends a research project for 2018, whereby some vessels volunteer to keep their cameras on when not selected for EM coverage (i.e., during 'normal' fishing), in order for PSMFC to determine whether catch handling impacts the speed at which vessels are able to fish.** Jennifer Mondragon will convene a teleconference with Workgroup members to determine how to collect the right data. The Workgroup also suggested that it may help to survey EM vessels to see whether their participation in the EM program would change if they were required to keep cameras on all the time. Dan Falvey will coordinate with the social science group at the AFSC to develop appropriate questions.

2018 Vessel Monitoring Plans

Jennifer Mondragon briefed the Workgroup on changes to the VMP template for 2018, based on the new regulations. The Workgroup provided general feedback to improve clarity. There have been some changes to pot catch handling requirements, in response to issues highlighted in the video review and by NPFA. It was noted that there may need to be additional changes in response to different handling practices for sablefish longline pots. There is also a new requirement for fishermen to track evidence of whale depredation in 2018. EM reviewers cannot track depredation on the video, so the VMP requests that fishermen mark evidence of depredation on the EM effort log. Claude Dykstra noted that there have been changes to the IPHC logbook on this issue, and that he and NMFS should coordinate to ensure that these efforts are consistent.

Jennifer also noted that new for this year is the requirement that VMPs be signed by the vessel operator. This will require additional work on the part of the EM service provider, but is important for the NMFS approval process. The Workgroup noted that it will be important to streamline this process as much as possible, and were glad to hear that digital signatures are acceptable. Jennifer also noted that the VMP also includes NMFS and OLE contact information, for anyone who has questions.

Shannon Fitzgerald noted that of the 46 seabirds that were intercepted this year, only 3 were held up to the camera for a sufficient length of time and with the correct bird position. The Workgroup recommends adding information to the VMP about correct bird positioning, and perhaps a recommended catch phrase that takes 2-3 seconds to say. Shannon will work with Jennifer to address these ideas.

Preliminary methodology for EM costs and splitting the fee (ADP Appendix B)

Chris Rilling gave an overview of Appendix B in the 2018 ADP, which provides a methodology for evaluating EM costs. In this section, Craig Faunce evaluated several scenarios of EM pool size and composition provided by Howard McElderry at AMR, and estimated a range of costs for the EM program. He began with an assumption that the vessels currently in EM would stay in the EM strata, and then modeled how many additional vessels could be included in the EM strata before exceeding 90% of the available budget, which this year is \$1 million. The results section identifies that the EM strata could add 35 new vessels (for a total of 110 vessels) and still be within budget (including video review costs).

The Workgroup was interested in the methodology, and felt that it is a good beginning for cost evaluation.

The Workgroup has the following recommendations for subsequent iterations of this work:

- Split out hardware equipment costs from field service costs. The analysis treats both field services and hardware a single cost category, but in reality the hardware cost is a multi-year investment, while field services are annual costs.
- Amortize the cost of equipment and hardware over multiple years. The current forecasts are only looking one year ahead, whereas to accurately capture the costs and cost savings associated with EM, it is important to be able to project the hardware replacement costs out over the 5- or 6-year lifespan of the equipment.
- Reconsider the 10% budget buffer. As with previous observer program analyses, the methodology aims to identify the size of the EM pool that would consistently cost up to 90% of the EM budget (of \$1 million), in order to buffer against the risk that the program will run out of money. If, however, the EM cost methodology is changed such that there is a replacement fund for equipment budgeted into every year, this replacement fund could, effectively, act as the budget buffer. If the budget is projected to overrun in a particular year, the money that has been allocated to equipment replacement would instead be used as an operational budget buffer, and accommodations could be made in a subsequent year to reduce the size of the EM pool in order to 'refund' the money to the equipment replacement fund.

- Provide some estimated projection of total sea days covered by EM vessels, to match with the projected fleet sizes (perhaps as histograms). The Workgroup noted this must be available because the model estimates the cost of video review based on projected sea days.

The Workgroup also discussed how the methodology will eventually affect the annual selection rate for the EM selection pool, currently set (somewhat arbitrarily) at 30%. On the one hand, the Council and stakeholders have discussed the importance of having EM be similar in its parameters to the human observer program, including the probability of being selected, unless there is a justified need to set parameters for EM differently. To achieve the goal of optimization of the partial coverage program overall, however, there may be reason to have a higher selection rate for EM if it is a more cost effective way to monitor fisheries without hindering the collection of necessary biological samples. It was noted that as with the human observer program, there will be an iterative learning process for the EM deployment methodology.

Draft Statement of Work for the EM contract for 2019

Chris Rilling briefed the Workgroup on the draft Statement of Work for the EM contract, and noted that the NOAA Acquisition and Grants Office (AGO) is asking for comments back by October 13th, submitted directly to them. The Workgroup appreciates the opportunity to provide input on the development of the contract, it is very helpful to give feedback before the agency finalizes the Statement of Work.

Comments on bidding the contract as a single observer/EM contract

Chris Rilling explained the benefits of bidding the observer and EM components as a single contract, noting that this is the agency's strongly preferred approach. It is also one of the items on which AGO has explicitly asked for public comment. A major advantage of a single contract is that NMFS has the flexibility to move money between the human observer and EM selection pools on the timeline dictated by the ADP (which is different than the timeline for the contract), allowing annual optimization of EM and human observer pools. Additionally, the staff workload for administering a contract is very high, and the Observer Program does not currently have the staff resources to be able to administer a second contract.

While acknowledging the agency's perspective, the Workgroup noted several disadvantages with a single contract. **By combining contracts, there is the real possibility that a strong bid from, for example, an observer provider, could be combined with a suboptimal EM provider and still be awarded the bid.** The agency may not get to choose their preferred observer provider AND their preferred EM provider, if they are partnered on competing bids. Also, as there exists a limited pool of bidders, combining the contracts may result in fewer bids and less competition. The Workgroup also notes that the public-private partnership has been unique and effective for EM, and does not want this bidding process to adversely affect that.

Workgroup comments on the EM statement of work as written

Section 3.4, Equipment Replacement and Innovation

The Workgroup recommends that this section needs to be restructured to describe the result that NMFS is trying to achieve, which is support through the contract for the innovation that is identified in the ADP, and partnership of the contractor to work with NMFS on innovation.

The process for bringing new technology into the program should be consistent with the steps outlined in the EM analysis and assurances in the final rule. The Workgroup, the Council, and stakeholders want the equipment on the boat to be well vetted. This includes knowing that replacement systems are reliable (for example that they work 90+% of the time), and knowing the cost of replacement systems. As written, the Statement of Work does not explicitly describe the vetting process for new technology adopted by the Council in the analysis: pilot testing for proof of concept, operational testing

for workability on a variety of vessels, and pre-implementation to ensure both the technology and agency assimilation of data is working smoothly. The way replacement technology is characterized in the Statement of Work appears to circumvent the collaborative process. Chris Rilling clarified, however, that this vetting has begun already, and will continue in 2018 and 2019, with a transition to the new systems not beginning until 2020.

Additionally, the Workgroup industry members expressed concern that participants are currently opting into the EM selection pool based on an assumption that they will be carrying the current systems. They want to have a similar experience with future equipment, that it does not impede fishing practices, and that the cost of the equipment (which is assumed to come out of the industry observer fee in future) is a known cost. The actual cost of future systems will not be “known”, however, until the new EM/Observer provider contract is approved. It was noted that it makes it hard to do outreach and encourage industry members to sign up for EM, when the near future presents an unknown about what equipment will be required.

A suggestion is to clearly distinguish in the Statement of Work, the services required to support the operational EM selection pool, and the services required to support development of innovative replacement equipment. The observer statement of work provides a model for this, as there are separate sections with requirements for observers to support the AFSC RACE division, and those to support the ADP. This would also help to clarify that fee money is not being used for research and development, which is not allowed under MSA and which the agency clarified in the final rule would not occur. Chris Rilling clarified at the meeting that using fee money for research would not happen, and that NMFS could add additional NMFS funding to the contract to support research, but having them listed as separate tasks would make this clear.

The Workgroup recommends that the contract should not specify details of replacement equipment that will not be installed until 2020. The contract should not pre-suppose, and thus limit, where innovation might go. The specifications that are listed in the Statement of Work are likely to be obsolete in 2+ years. The Workgroup understands that the specifications are intended as a baseline, but they should be replaced with more general language (for example, specifications need to meet industry standards for machine vision). Under the contract, it should also be possible to replace existing equipment with non-stereo cameras. While moving to stereo cameras and/or automated image analysis for fish length measurement and species identification may be the agency’s intent, we do not know whether current research will be ready for mainstream in 3 years, or that stereo cameras will best meet the agency’s needs (versus some other innovation).

The innovation section should be restructured to identify the goal that replacement tech should be innovative, and to specify a process by which NMFS will have significant input with the contractor in the direction of that innovation. It is better to write the contract in terms of objectives, and allow contractor innovation to meet them, rather than limiting the direction needed. For example, a goal may be to develop technology that is capable of getting lengths. Additionally, if the intent is for the EM service provider to industrialize and implement a prototype, that should be clear in the contract, and NMFS should not underestimate the workload involved, nor be surprised when that is reflected in the pricing.

The contract should reference research and development objectives that are identified in the ADP or the agency’s EM/ER strategic plan (which may need to be updated). The development of innovation should involve the Council and Council process (as the Council and Workgroup have successfully been involved with developing the current iteration of EM). It may be useful to explain, in the contract, the process of the ADP, and how NMFS works with the Council to identify and achieve objectives.

Section 4, Service Requirements

The Workgroup highlighted that NMFS needs to improve the characterization of required services. There is good specificity about the initial install service requirements, but less clear description of overall service and maintenance needs. **The Workgroup recommends that it is better to focus on the service**

level expectation, rather than, for example, the number of personnel. What is meant by ‘local’ capacity – does that refer to primary ports, or all Alaska communities? What are service expectations for in-person technical fixes outside of primary and secondary ports? The timing of service expectations was also unclear, for example when the different 24-48-72 hour conditions apply.

Miscellaneous issues

In the **description of VMPs**, it states that the contractor should work with the vessel owner to develop the VMP. In fact, the contractor is the leader in preparing the VMP, and the VMP needs to be updated annually, with the contractor ensuring that the new VMP is signed annually. This will be somewhat work-intensive, and should be explicit.

In the section on **real time system health and image quality**, satellite modems are listed as a required component in future. The Workgroup noted that testing this year has demonstrated that we have not yet articulated a clear need for real-time communication, and there was reluctance to commit to this purchase if we decide that it is not cost effective.

Additionally, the section on **EM Lite** also seems included as a placeholder, for a technology that has yet to be vetted through the Council process to understand the costs, impacts, and monitoring objectives. As written, the contract needs to clarify what NMFS is asking for, for example a bid for the cost of EM lite on a certain number of vessels/year?

The Workgroup recommends that NMFS define a core set of services or equipment that would be supplied to the vessel on an annual basis out the observer fee, and what are additional items that you would expect a vessel to pay for. For example, all the malfunctions that are listed on the last pages of the VMP – those would be covered by the annual fee. But if a vessel wants to install an additional camera in the engine room, that should be paid for by the vessel. The EM system should be able to accommodate those customizations, but labor and equipment should not be paid for from the fee. There may be other examples that are not so clear. For example, should extensive conversions required for a vessel that goes seining in the summer be covered by the fee? Should vessels that want to take backup equipment to ensure that they are not delayed in their fishing plans have them covered by the fee? Does it depend on which equipment? The Workgroup suggested that NMFS could also consider specifying a minimum breakage threshold. For example, the first replacement camera per year is paid for by the program, but after that the operator has to pay out of pocket.

Questions for AGO

The EM Workgroup identified the following questions to ask AGO representatives, which were asked and answered at the OAC meeting. Please refer to the OAC report for AGO’s response.

- **It is not clear from this statement of work what the unit is for this bid.** The Workgroup has talked in the past about whether it is a per day cost, or a per vessel cost. In past, Workgroup has assumed there would be two units of work: 1) an annual per vessel cost for service for a vessel with an EM system installed, and 2) an annual per vessel cost for a vessel that is new to the program. The Workgroup recognizes, however, that how uncertainty, especially, is “rolled up” into a bidding unit creates very different pricing outcomes. There needs to be a lot of forethought about the bidding unit.
- **Can we put in price targets for this type of contract?** If we have ballpark of budget (e.g., \$3-400,000 for a revenue neutral option), could we get contractors to bid on the level and quality of service they could provide for this budget level, and select providers on that basis?
- **Is there time to redefine the service delivery model in this contract, and if so what is the timeframe for doing that?** Is this the only opportunity to provide input on the contract?

Update on EM policy directive

Jennifer Mondragon provided an update on the status of the NMFS EM policy directive, which is under internal review. The policy is specific to cost allocation of EM services between the agency and industry. A preliminary draft of the concepts was presented to the Councils in May 2017, but the release of the draft for official Council comment has been delayed. Jennifer noted that much of the cost allocation is consistent with what was evaluated in the EM Integration analysis, but that the unknown of who will pay for video review (agency or industry) is still unknown.

Jennifer also noted that while national policies on EM data storage are also being worked out at the national level, that is being addressed as a separate initiative. The Workgroup noted that as Brett Alger has now been appointed as the National EM Coordinator, we should invite him to our next meeting, in Alaska.

Update on Research and Development

Suzanne Romain gave a demonstration on the progress with developing stereo chute cameras, and with Craig Rose, described how that work applies to the development of stereo rail cameras. In addition to the large chute that is being tested on trawl catcher processors for measuring halibut, she has developed a small chute camera that can be used on small vessels and in processing plants. Farron Wallace also gave an update on related work at the University of Washington on automated image processing and data transmittal. In 2017, the stereo rail camera was installed on 2 longline vessels and three IPHC survey vessels. EM lite was installed on one vessel. Additionally, chute stereo cameras have been tested in 2017 in the trawl fleet for halibut bycatch monitoring and for the halibut deck sorting EFP.

The Workgroup recommends that the ADP include a description of the vessels that are volunteering for EM in 2018, including whether they are part of the zero selection or EM stratum, and perhaps the objectives for EM research and development in 2018.

Scheduling and other business

The Workgroup discussed their continuing role as the program transitions to an integrated EM/Observer program. There continues to be a lot of value in the more detailed and practical conversations that the EM Workgroup engages in, particular as EM sectors are still in pre-implementation. Those detailed conversations would not occur if the Workgroup were absorbed into the OAC. The EM Workgroup is very demanding of its members in terms of working through issues; the role of the OAC is more to receive information and provide feedback. This Workgroup structure has served its purpose well to date. At the same time, the EM program for fixed gear is no longer a standalone program, and next steps are to look at how the EM program integrates with observer deployment, which brings in other stakeholders.

The Workgroup suggests that it may be appropriate for staff to prepare a retrospective report to the Council about the objectives that the Workgroup has been given by the Council, how they have been achieved, and lessons learned to apply to other EM projects that the Council may wish to undertake. For 2018, the pot sector is still in the final year of pre-implementation, and the agency is preparing for the final step of EM integration next year when the observer fee needs to be split out to support both human observers and the EM pool. There are several other EM projects that are being proposed, tested or in which stakeholders have shown an interest, and the Council may wish to consider which of these should be prioritized next. The Council is on record with an interest in using EM to extend monitoring to vessels under 40 ft, currently in zero selection. At the same time, there is clearly interest in EM for the GOA trawl fisheries, especially in the western GOA, with some work already underway through the development of Exempted Fishing Permits, and that work has also had the support of the Council. **Given limited staff resources, the EM Workgroup recommends that the Council review and establish new priorities for EM, determine whether a workgroup approach should be maintained, and examine the composition of the EM workgroup.**