

## Northeast Electronic Monitoring Workshop in the National Framework

Dr. Russell Brown, Deputy Science and Research Director, NEFSC

7 May 2014

I would like to thank Melissa Hooper and her colleagues at GARFO and Geoff Smith and The Nature Conservancy, and Steering Committee members, for organizing this workshop; and thanks to Laura Taylor Singer for the introduction.

A couple of weeks ago, I had the chance to take a road trip with my son. We were faced with the luxury of a college decision. This was the result of a year or two of consideration of whether college should be in the cards, what career goals college would address, pros and cons of location and size, what financial aid was available, and a host of other factors that go into a decision on the next four years which represents an eternity to an 18-year old. We continued these conversations in the car during our trip. I thought of how far we'd come, to discussions of goals and tradeoffs, from just a few years back, when car conversations were on the order of "Are we there yet?"

Similarly, I think our regional discussions on EM are maturing. For several years, we had been trying to evaluate whether we were there yet on EM. Now, we realize we need to evaluate how our entire regional fishery dependent data collection system needs to change in order to cost-effectively monitor fisheries, to manage fisheries effectively and efficiently; and where EM fits in that context.

The fishery dependent data system in the Northeast did not evolve to be responsive to the need for near-real time monitoring of quotas, as expected under some of the region's Fishery Management Plans. While other regions extensively adopted quota systems early on, and the monitoring programs required to support them, some FMPs in Northeast used a variety of different management tools with different monitoring requirements. Over the past two decades our monitoring system evolved in a piecemeal manner. When MSA reauthorization moved to universal requirements for Annual Catch Limits, we found, not surprisingly, that continuing to try to tinker with our current system was neither effective nor efficient.

Nationally, the past year or so has been especially strong in terms of EM guidance. I'll touch very briefly on four examples:

- A series of white papers on electronic monitoring and electronic reporting developed by the agency February, 2013 found that
  - a. "the goal of video monitoring is to provide a cost-effective monitoring solution capable of collecting data for scientific, management and compliance purposes;
  - b. "operational issues include[ed] the ability to accurately identify species, ability to estimate weights of discarded fish, and length of time required to obtain and review video and extract all requisite information"
  - c. "video monitoring has proven to be most effective as a compliance tool", that "video monitoring may not be effective for identifying protected or prohibited species"
  - d. "projects vary widely depending on the management objectives of the monitoring program, and may not be more cost-effective than observers."
- A NMFS Policy directive on electronic technologies and fishery-dependent data collection was released in May, 2013, to provide guidance on adoption of electronic

technologies including video cameras for electronic monitoring. The directive called for design and periodic review of fishery-dependent data collection programs to ensure “effective, efficient monitoring programs that meet industry and government needs...”

- In 2013, the Environmental Defense Fund released the “Fishery Monitoring Roadmap” which outlined a process for designing or revising monitoring programs, and matching monitoring tools such as EM with those program goals. Specifically, the Roadmap was intended to clarify “what EM can and cannot do...”; outline the “process for incorporating EM into a fishery monitoring program”; and identify “fishery characteristics that will influence the cost of deploying EM.” Dorothy Lowman, the first author of the Roadmap, will be speaking later this morning.
- In January, 2014, a national workshop on electronic monitoring was convened to bring together a wide range of partners with experience in different aspects of EM research and application. Collaborative approaches were identified as most productive.
- In April, 2014, the agency released a summary of guidance and best practices for use of electronic monitoring and reporting in federally managed fisheries. The overarching principles were that an EM/ER program should be flexible to satisfy multiple requirements; should be scalable to varying industry and agency capabilities; and should be inclusive and collaborative among management, industry, enforcement, scientific, third-party service providers and other stakeholders, for participation in design, development and implementation.

The guidance document observes that EM will more often “be implemented as a change to an existing system.” – a potential improved method in an already functioning system. However, I would argue that we do not yet have a fully functioning system for near-real time ACL monitoring in the Northeast.

Within the region, the past years have been especially strong in terms of identifying the need to streamline and overhaul our NE fishery-dependent data collection system. Three quick examples:

1.) Former New England Fishery Management Council Chairman John Pappalardo requested an external review to improve regional fishery management processes. The resulting report known as the Pate report recommended “a comprehensive analysis of all NMFS data systems to identify areas that will improve data gathering, data management, and data use.”

2.) Tiger Team: In response to those recommendations in the Pate Report, a joint Council/NEFSC/GARFO working group developed several recommendations to streamline the Fishery Management Plan development process. The team recommended a Fishery Dependent Data Committee to review the impact of management measures on data quality.

3.) A joint NEFSC/GARFO and GMRI visioning project is underway to determine fishery dependent data needs, to develop the next generation systems for fishery dependent data collection. Next steps will be design of the system and identification of the optimal methods of obtaining data in a way that cost-effectively meets science, management and industry needs. (Holly McBride will present some lessons learned from this effort later this morning.)

We know we need a comprehensive fishery dependent data collection system, and we’re moving quickly to design and implement the next generation system. We’ll be discussing goals – scientific, management, compliance and cost-effectiveness; and tradeoffs, including the role of EM to get the job done.

4.) The New England Fishery Management Council has an active Electronic Monitoring working group that is generating a white paper that will be presented to the Council later this year.

In April, 2014, the NOAA perspective on electronic monitoring in the Northeast was developed and discussed at the Northeast Region Coordinating Council. Two models were identified that held “promise for effective use in Northeast fisheries.”:

“1. Full retention with monitoring for compliance – Video monitoring has proven effective as a tool for monitoring compliance with specific requirements. In this case, EM would be used to monitor compliance with a full retention requirement and accompanied by a comprehensive dockside monitoring program.

2. EM for validation of the vessel trip report – EM can be used as an audit tool to verify industry reporting. In this case, initial quota accounting would be based on industry reports. EM records would be sampled to validate the vessel trip report, and disincentives would be structured to motivate vessel operators to fill out the forms correctly and fully. The use of electronic vessel trip reports may play a role in enhancing the efficiency of data collection and processing.”

Next steps were identified, including identification of the range of statistical, operational, regulatory and enforcement issues and questions; and development of a plan for resolution.

Where do we go during this workshop?

- We need a common understanding of where we are on EM in region: we need to develop a common vocabulary and baseline understanding as we move forward collaboratively.
- We also need to identify how to integrate EM into existing data system --- BUT

However, we also need to understand that future data system may not look like current data system; associated regulation and governance may also need to change to implement a new data system. Beyond the current proposed applications of EM, how else could EM fit? How willing is industry to adopt EM solutions? We should prioritize discussions on issues that are robust to any particular use of EM, beyond current considerations.

In conclusion:

We can determine the capabilities of EM within our particular regional fisheries and in the context of our current monitoring system. However, the application of EM needs to rest on the firm foundation of a comprehensive fishery dependent data collection system. In this region, we recognize shortcomings in the current system and are developing that firm foundation, which should serve the needs of management, science, and enforcement, while being cost effective. My 18 year old brings enthusiasm and earnest consideration to his first big challenge to balance multiple conflicting objectives. I hope that all of us bring a similar enthusiastic and earnest consideration to this workshop.

