The National Electronic Monitoring Workshop was held 8-9 January in Seattle, WA. The workshop was organized by Dorothy Lowman, consultant and Chair of the Pacific Fishery Management Council, who worked with a steering committee of managers, scientists, fishing industry representatives, service providers, and conservation interests from around the country. The workshop was designed to get people from diverse interests, fisheries, and regions to discuss how to move forward with implementing electronic monitoring in federal fisheries from around the country. The tone of the planning and workshop was we know how to do pilot projects and energy now needs to be directed to implementing electronic monitoring as a viable tool in appropriate federal waters fisheries.

The goal of the workshop was to provide information and contacts that foster the integration of electronic monitoring into fishery monitoring systems. Objectives included:

- Gaining a better understanding of the possible range of electronic monitoring applications
- Identifying solutions to current challenges to integration of electronic monitoring
- Sharing lessons from each of our experiences with pilot studies and early design and implementation efforts
- Identifying key program and design elements
- Discussing electronic reporting needs to support effective monitoring implementation plans
- Obtaining tools to facilitate development of regional electronic monitoring implementation plans
- Building professional networks to exchange electronic monitoring information

The workshop was attended by about 150 people, most of whom were selected because of their interest in electronic monitoring, electronic reporting, and fishery dependent monitoring issues. The workshop format was for plenary sessions that discussed broad electronic monitoring issues (the 20,000 or 30,000 foot view) with breakout sessions on specific issues or geared to specific types of fishery monitoring needs (multispecies fisheries, high volume fisheries, small boats and recreational fishing, and protected species or rare events). The workshop agenda can be found immediately at http://www.cvent.com/d/54qkgf and is attached to this report. An ongoing website that will provide the workshop information as well as other relevant EM information as it becomes available will be launched shortly at the following address: www.EMinformation.com. Workshop participants responded very positively to the meeting agenda and format with good energy levels, willingness to engage, and willingness to think about problems in new and open
ways (thinking outside the box). My sense is that people left the meeting excited about the potential that electronic monitoring holds for fishery monitoring, a desire to advance discussions and implementation in appropriate fisheries applications, and a commitment and understanding of the need for cooperative, inclusive planning to successfully implement electronic monitoring systems in federally managed fisheries.

Among the take away ideas from the workshop include:

1) Key elements to success for electronic monitoring programs
   a. Clear program objectives are needed upfront
   b. Need clear, shared definitions
   c. Scale program to value of fishery
   d. Develop technology, field services, and data services as a package
   e. Include all stakeholders in planning process from beginning
      i. i. Include IT, law enforcement, service providers in addition to
      managers, scientists, industry
   f. Need performance measures to determine program effectiveness
   g. Beware of over reliance on new technology or technologies beyond
      what is needed to meet program objectives, i.e. "beware of the shiny
      bauble".
   h. Consider incentives in program, including regulatory incentives
      i. i. Positive incentives
      ii. ii. Negative incentives, i.e. do this or something draconian will
      happen

2) Each electronic monitoring application is unique but can use the same
   foundation, i.e. don’t re-invent the wheel when considering new electronic
   monitoring programs

3) Consider multiple uses for electronic monitoring data, e.g. bycatch
   monitoring, catch monitoring (when possible), uses by industry members, and
   for science purposes

4) New technologies and processes will continue to be tested through pilot
   projects but where the vision is for implementation, projects should be
   identified as “pre-implementation” from the outset and the plan should
   incorporate the necessary steps and elements of success listed above

5) There is strong interest in developing programs that establish performance
   standards and then let industry and service providers figure out how to meet
   the standards

6) There is value in adopting electronic monitoring in transitional steps (i.e.,
   adopting electronic monitoring for certain gears, vessel sizes or sectors
   within a fishery that are ready; phasing implementation over time, etc.)
One issue that was mentioned a number of times as an important ongoing issue was cost. Cost is a significant discussion on everyone’s mind to trying to figure out the costs of technology, field services, and data services in a way that is comparable to other monitoring methods is a significant issue. This was discussed in breakouts at the workshop but was not resolved. This is in part because cost comparisons are not easy to conduct as electronic monitoring costs can vary widely depending on the specific design requirements; there is no valid “average” or “typical” electronic monitoring cost.

Another cost issue is the policy issue of who pays for electronic monitoring programs – industry, government, or some other entity. The NOAA Fisheries message that new data collection programs must include how they will be paid for was heard by most participants. However, people are still pushing to figure out how to pay for these systems and are trying to understand what it means to be beyond the period when NMFS paid for much of the cost of electronic monitoring pilot projects, as has been done in the past. This is particularly true in fisheries with low profit margins such as New England groundfish. Moving forward on common ideas across regions would be most efficient.

Post workshop, the following issues will be developing or gaining momentum.

1) The workshop report is scheduled to be finished by June 2014.

2) All regions were encouraged to hold regional electronic monitoring workshops. The only confirmed regional workshop will be in New England in April 2014 which is being organized by The Nature Conservancy working with the Northeast Regional Office.

3) Work will begin on Regional Electronic Technology Implementation Plans as called for in the NMFS Policy Directive from May 2013.

4) There will likely be increased discussion of electronic monitoring at Council meetings by Steering Committee members and by industry members interested in advancing electronic monitoring in their respective fisheries or regions.

5) Followup by NMFS on promoting communications, IT integration and support on electronic monitoring transitions (regulatory, technical, policy) was expected by participants.