

ENFORCEMENT CONSULTANTS REPORT ON REGULATIONS FOR VESSEL MOVEMENT MONITORING

The Enforcement Consultants (EC) have reviewed the document Agenda Item I.1, Attachment 1, April 2015 *Vessel Movement Monitoring Public Scoping Document* and have the following comments.

We believe the Vessel Movement Monitoring Public Scoping Document appropriately chronicles the events and discussions leading up to this Council action. We also support the draft Purpose and Need Statements and Supporting Goals and Objectives as written.

Management Measure 1: Monitoring for Continuous Transit in the Groundfish Fishery.

For over eighteen months, the EC has been in discussion with the Council, its advisory bodies, and Council staff on seeking alternatives to a one-hour vessel monitoring system (VMS) ping rate, a rate that has been deemed inadequate to demonstrate continuous transit, the regulatory requirement for vessel movement within restricted West Coast groundfish conservation areas. In those discussions, the EC has reiterated that VMS technology provides information on the location of the vessel (GPS waypoints), but provides no information about the status of the gear being deployed by that vessel, and as such, does not provide conclusive information regarding fishing events.

VMS first became a requirement for limited entry permit (LEP) vessels, both trawl and fixed gear, in 2004 with the establishment of rockfish conservation areas for protecting overfished rockfish stocks. The VMS requirement was expanded to Open Access vessels retaining groundfish in Federal waters in 2006. At the time, VMS was the only electronic monitoring (EM) tool in the “tool box.” Today, numerous EM systems are either available for immediate deployment or are in various stages of analysis and development. The strawman alternatives for trawl and non-trawl include some of these new EM options.

Trawl Fishery Strawman Alternatives:

For vessels where the gear is affixed to the vessel, i.e. trawl, the EC believes an increased VMS ping rate or some other enhanced data stream such as an EM system, currently being evaluated by this Council as an alternative for 100 percent observer coverage, would be adequate for determining whether the vessel is maintaining continuous transit in the restricted conservation areas. Additionally, an increased ping rate or an enhanced data stream would provide a better understanding of the status of the gear being deployed by that vessel. Alternatives B through C inclusive of Suboption B1 are consistent with this position. We recommend Alternatives B through C inclusive of Suboption B1 along with Alternative A, the No Action Alternative be adopted for analysis and subsequent adoption of a Preliminary Preferred Alternative (PPA) at the Council’s September 2015 meeting.

Non-trawl Fishery Strawman Alternatives:

Unlike trawl, the location of the gear deployed by fixed gear vessels (longline and pot), and to some extent drift gill net vessels, may not have any correlation with the location of the vessel. The VMS units currently required for these fisheries provide GPS location information for the

vessel, not necessarily the gear. An increased ping rate may improve the ability to demonstrate compliance with the continuous transit requirement, but again does not demonstrate fishing or location of the gear.

Alternatives C, D, E, and F offer opportunities for an enhanced data stream inclusive of additional GPS location reporting and sensor data providing information on the status of the gear and its deployment location. Alternative E would expand these data sets to include video imagery.

In preparation for this agenda item, the Council requested the EC lead an effort with Council staff and NMFS SFD staff to search for existing off the shelf (OTS) components that could meet numerous stated objectives which have translated into minimum requirements.

Minimum Requirements:

- Unit cost under \$1,000.00
- Geo-fencing capabilities
- Adjustable ping frequency
- Capability to store location data locally and transmit at set intervals to minimize costs
- Ideal transmission cost around \$30-\$60/month
- Rugged & tamper-proof design for saltwater environments
- Additional input/output (I/O) ports for scalability. Addition of hydraulic sensors, gear movement
- Sensors, etc.

Vessel Movement Monitoring Tech Group Findings:

While there are a variety of OTS units that are capable of transmitting GPS coordinates and utilizing cellular or WiFi data connections to transmit location data, most of the OTS units evaluated had significant drawbacks when it came to being rugged enough to withstand time at sea and being able to be tied into a vessel's power grid vs. running on batteries — none had geo-fencing capabilities or additional I/O ports for additional sensors. It became clear that to capture the type of data desired, taking into account the environment the equipment would be placed in and the reliability needed, many common OTS units simply would not be viable solutions.

By stepping up to a more commercial application, it was possible to identify equipment that would fit the stated minimum requirements. The core benefits of utilizing commercial units are the rugged design, proven track record for this type of application, and overall reliability offered from companies that design these types of units. After detailed discussions with vendors, the group identified two devices as recommended alternatives to augment VMS for reliable vessel monitoring. These units, the Polestar IDP-690 by SkyWave and the FW Telematics FWT 750VMS; and a description of their costs and attributes can be found in the Appendix A pages 17 and 18 of Attachment 1.

The EC would like to point out that it was not possible to find a unit that met the minimum requirements and used WiFi or cell tower as a transmission source. WiFi and cell tower transmission are listed as a transmission option in Alternative C and as a specific transmission option in Alternative F. The EC suggest that the search continue for units that meet the minimum requirements list using WiFi and/or cell tower to ensure low cost options are fully explored.

We also recommend the General Counsel Enforcement Section proposed new text language for the continuous transit definition (page 9 of Attachment 1) be forwarded as an alternative for PPA consideration at the September Council meeting.

The VMS program was developed by OLE for “real-time” management of vessel movements and provides OLE with direct access to the data being gathered. OLE currently only has capacity to collect and store GPS location data, with no immediate plans to expand the type of EM data it collects and stores. The alternative units identified here may not qualify for OLE type approval, nor may the alternative reporting requirements: i.e. bundling, delayed reporting beyond a minimum of every 60 minutes, lack of two-way communication, and collection of data beyond GPS location information.

Accordingly, if the Council expands and/or modifies the amount and type of data currently collected under the existing VMS Program, then it may be appropriate to shift the data collection and management burden of West Coast EM data from OLE to another management entity such as the Pacific States Marine Fisheries Commission. This move would be consistent with development of the EM program that is currently being considered by the Council under the trawl rationalization program. OLE would continue to analyze the expanded data sets for compliance purposes.

Management Measure 2: Removal of Derelict Crab Pots from Rockfish Conservation Areas.

This management measure involves only those vessels required to have VMS and desiring to stop in the RCA to retrieve a derelict crab pot. The EC would like to reiterate that the three states currently provide ample opportunity for derelict gear removal.

As referenced in the Vessel Movement Monitoring Public Scoping document, the issue of concern regarding removal of derelict crab pots from RCAs is whether activity occurring within the RCA can be documented and corroborated by means of electronic options. Minus enhanced electronic monitoring with cameras and increased position data, enforcement of RCA restrictions would be extremely difficult. Enforcement personnel would not have suitable evidentiary means substantiating RCA restriction compliance. Current VMS requirements only document vessel position every hour. It does not document the activity in which the vessel is engaged.

The EC believes current derelict gear retrieval programs established by the states have adequately addressed the issue at hand therefore negating a need for this management measure.

Management Measure 3: Fishery Declaration Enhancements (Gear Testing and Whiting Fishery Declaration Changes)

The EC believes all alternatives listed under Gear Testing Strawman Alternatives and the Whiting Fishery Declarations Changes are appropriate for forwarding for further analysis and designation of a PPA at the Council’s September meeting. The EC would note that the term “gear testing” under these options is inclusive of fishing activities to test: deployment of nets using open cod ends; calibration of engines and transmission under load, i.e. towing a net; deployment of wire and/or doors; testing new electronic equipment associated with the deployment of fishing gear; and testing and calibration of newly installed propulsion systems, i.e. engine, transmission, shaft, propeller, etc.

Management Measure 4: Movement of Individual Fishing Quota (IFQ) Fishpot Gear Across Management Lines

This management measure consideration is limited to the movement of IFQ fishpot or traps gear, which is unique from longline and trawl gear in that because of the size and configuration of the gear, it may not be possible to store all the gear on the vessel deck when moving gear from one management area to another. Consideration is being given to this fishery, because unlike the LEP sablefish tier fishery, the IFQ fishery participants per regulation cannot fish in more than one management area on a given trip. Also unlike the LEP sablefish tier fishery, the IFQ fishery has a 100 percent human observer requirement. The EC believes Alternatives B and C will not complicate or compromise catch accounting or scientific data collection.

Recommendations:

Management Measure 1:

Forward all alternatives listed under Trawl Fishery Strawman Alternatives for further analysis and subsequent designation of a PPA at the Council's September meeting.

Forward all Non-trawl Fishery Strawman Alternatives for further analysis and subsequent designation of a PPA at the Council's September meeting.

Forward the proposed new text definition of continuous transit: "*Continuous transiting or transit through* means that a vessel crosses a groundfish conservation area or EFH conservation area on a heading as nearly as practicable to a direct route, consistent with navigational safety, while maintaining expeditious headway throughout the transit without loitering or unnecessary delay." as an alternative for PPA consideration at the September Council meeting.

Management Measure 2:

Remove this management measure.

Management Measure 3:

Forward all alternatives listed under Gear Testing Strawman Alternatives and Whiting Fishery Declarations Changes for further analysis and subsequent designation of a PPA at the Council's September meeting.

Management Measure 4:

Forward all alternatives listed under Movement of IFQ Fishpot Gear Across Management Lines for further analysis and subsequent designation of a PPA at the Council's September meeting.

PFMC
04/13/15