

basic system was the minimum system that would maintain the integrity of the closed areas. However, this action will not preclude vessels from installing an upgraded VMS system.

A VMS program that identified the sectors of the groundfish fleet that would be required to have a VMS or observer monitoring system was considered. The alternative coverage levels ranged from limited entry vessels actively fishing off the West Coast to all limited entry, open access, and recreational charter vessels regardless of where fishing occurs. During the initial phase of this program the Council recommended starting with vessels registered to limited entry permits fishing in the EEZ off the Washington, Oregon, and California coasts to be required to have VMS transceiver units. This is intended to be a pilot program that begins with the sector that is allocated the majority of the groundfish resources. In addition, alternative approaches for funding the purchasing, installation, and maintenance of VMS transceiver units, as well as the responsibilities for transmission of reports and data were considered and included the following alternatives: Vessel pays all costs, vessel pays only for the transceiver, NMFS pays for initial transceiver, and NMFS pays all costs.

Although the Council recommended that NMFS fully fund a VMS monitoring program, it is not possible at this time because neither state nor Federal funding is available for purchasing, installing, or maintaining VMS transceiver units, nor is funding available for data transmission. Because of the critical need to monitor the integrity of conservation areas that protect overfished stocks, while allowing for the harvest of healthy stocks, NMFS believes it is necessary to proceed with this rulemaking.

Approximately 424 vessels that are registered to limited entry permits that operate in the EEZ off the states of Washington, Oregon or California would be required to carry and operate a NMFS type-approved VMS transceiver unit. All but 10 of the affected entities qualify as small businesses. Vessels required to carry VMS transceiver units will provide installation/activation reports, hourly position reports, and exemption reports. As this proposed rule was developed, the burden on fishery participants was considered and changes were made to ensure that only the minimum data needed to monitor compliance with regulations are being required.

In addition to VMS requirements, declaration report requirements would

apply to vessels registered to limited entry permits with trawl endorsements (262 vessels); other vessels using trawl gear, including exempted gear used to take pink shrimp, spot and ridgeback prawns, California halibut and sea cucumber (299 vessels); and tribal vessels using trawl gear, before these vessels are used to fish in any trawl RCA or the CCA. In addition, declaration reports would be required from vessels registered to limited entry permits with longline and pot endorsements (167), before the vessel could be used to fish in any non-trawl RCA or the CCA.

The Council's VMS Committee initially considered declaration reports as "per trip" reports. Following consultation with fishery participants, it was determined that the needs of NMFS and the USCG could be met with less frequently made declaration reports. Therefore, it was determined that a declaration report identifying the type of gear being used by a vessel would remain valid until cancelled or revised by the vessel operator. This results in a significant reduction in the number of reports. Following consultation with fishery participants, it was determined that some vessels may prefer to reduce the costs of reporting when leaving the EEZ off the coasts of Washington, Oregon, and California. A substantial number of permitted vessels also fish in waters off Alaska and in areas seaward of the EEZ. In addition, vessels are commonly pulled out of the water for extended periods. To reduce the reporting burden on vessels outside the EEZ, an optional exemption report was proposed to allow vessels to reduce or discontinue VMS hourly position reports when they are out of the EEZ for more than 7 consecutive days.

The proposed measure (alternative 3), which would require limited entry vessels to purchase and operate a VMS in the EEZ off of Washington, Oregon, and California, is expected to increase the profitability of individual vessels that participate in the VMS program. To determine profitability, the Council compared the costs of purchasing and operating a VMS unit to the increase in revenue that would be obtained from expanded fishing opportunities under the depth management program. Since revenue data for individual vessels were not readily available, the Council used average annual revenue per vessel as a proxy. In the absence of vessel operating cost data, the Council considered only the cost of purchasing and maintaining a VMS unit and assumed other costs to be constant.

The VMS units that have been type-approved for this fishery range in costs and service features. This allows the

vessel owner the flexibility in choosing the model that best fits the needs of his or her vessel. NMFS would pay for all costs associated with polling (when the processing center queries the transceiver, outside of regular transmission, for a position report). The costs of installation are minimal because the transceivers can be installed by the vessel operator. Vessels that already have VMS transceiver units installed for other fisheries or personal purposes could use their current unit, providing it is a model that has been type-approved for the Pacific Coast groundfish fishery and the software has been upgraded to meet the defined requirements.

The Council estimated that, under the proposed VMS measure, costs of purchasing and installing the unit would be between \$800 and \$3800 per individual vessel, and between \$548 and \$1698 per year to operate and maintain the unit. Revenues from expanded fishing were estimated to increase \$26,000 per year for limited entry trawl vessels and \$14,000 per year for limited entry longline and pot vessels, far exceeding the exceeding the estimated start-up and maintenance costs of the VMS.

While ex-vessel revenues appear higher on average for vessels likely to be required to use VMS under the depth-based management regime, it should be noted that fishing costs may also be higher, offsetting some of the apparent gain. Unfortunately, vessel cost data necessary to estimate this effect are currently not available. It is also important to keep in mind that using average revenues masks the variability of ex-vessel revenues in each vessel class. While on average, additional revenues appear greater than VMS-related costs, for some individual vessels in each class this will not be the case.

Alternative 4, which would implement a two-way VMS, would produce higher costs per vessel (year 1 at \$3,878-\$7,607; subsequent years at \$1,063-\$2,342) and would yield less profit, *ceteris paribus*, than the proposed VMS alternative. Alternative 5, which would implement observer coverage, would be very costly at \$300 per day, or \$36,000 per year assuming 10 fishing days per month, and would most likely produce economic losses for the majority of limited entry vessels.

Alternative 2, which would allow expanded fishing by use of declaration only, would be more profitable to limited entry vessels than the proposed VMS measure, since they would earn the same revenue at a minimal cost. However, the Council believes that