

than the adjusted limit for 2003, it is not likely that more effort controls (e.g., bag limits) will be required to constrain 2004 recreational landings. Overall, positive social and economic impacts are expected to occur as a result of the scup recreational harvest limit for 2004. The Council intends to recommend specific measures to attain the 2004 scup recreational harvest limit in December 2003, and will provide additional analysis of the measures upon submission of its recommendations early in 2004.

Black sea bass recreational landings increased slightly from 1991 to 1995. Landings decreased considerably from 1996 to 1999, and then substantially increased in 2000. In 2001 and 2002, recreational landings were 3.42 million lb (1,551 mt) and 4.46 million lb (2,023 mt), respectively. For the recreational fishery, the adjusted 2004 harvest limit under Alternative 1 is 4.01 million lb (1,558 mt), a 2-percent increase from the 2003 recreational harvest limit and a 10-percent decrease from 2002 recreational landings. Under Alternative 2, the 2004 recreational harvest limit would be 3.40 million lb (1,542 mt), a less than 1-percent decrease from the 2003 recreational harvest limit and a 23-percent decrease from 2002 recreational landings. As such, this alternative could cause some negative economic impacts due to decreased fishing opportunity, depending upon the effectiveness of the 2002 recreational black sea bass measures. The 2004 recreational harvest limit under Alternative 3 would be 4.47 million lb (2,027 mt), a 30-percent increase from the 2003 recreational harvest limit and a less than 1-percent decrease from 2002 recreational landings. Alternative 3 would likely result in positive economic impacts on the recreational fishery because of an increase in fishing opportunities. The Council intends to recommend specific measures to attain the 2004 black sea bass recreational harvest limit in December 2003, and will provide additional analysis of the measures upon submission of its recommendations early in 2004. Overall, positive social and economic impacts are expected to occur as a result of the preferred black sea bass recreational harvest limit for 2004.

The costs and benefits of allowing small mesh experimental nets to fish in the GRAs under the GRA Exemption Program were described in the proposed rule (67 FR 70904, November 27, 2002) and the final rule (68 FR 60, January 2, 2003) implementing the 2003 specifications. Those impacts are not repeated here. These costs and benefits could also be realized under the

proposed 2004 GRA Access Program. The costs would include gear changes to accommodate mesh modifications and fees for at-sea observer coverage; the benefits would be derived from an increase in *Loligo* squid landings. Thus, positive economic impacts on the *Loligo* squid fishery would be expected relative to the GRA measure without the small mesh experimental net provision. However, in order to participate in the 2004 GRA Access Program, vessels would have to comply with new requirements that are analyzed below.

All vessels participating in the GRA Access Program must have installed on board an operational VMS unit. VMS is a comprehensive information system that serves as an important enforcement and catch monitoring tool, and has been in place in New England for the past several years for Atlantic sea scallops, Northeast multispecies, and Atlantic herring. In New England, this type of system has been employed to replace the Days-at-Sea call-in system, provide accurate location data, and provide information used in other analyses. VMS requirements are located at 50 CFR 648.9.

It is estimated that the initial maximum cost of a VMS to vessel owners will be approximately \$5,000 to \$6,000 per vessel. The annual maintenance fee for the VMS system is approximately \$1,800 per vessel. Based on the number of vessels that had directed *Loligo* squid trips (i.e., greater than 50 percent of the total landings were *Loligo* squid) in the GRAs (1996–1999) it is expected that up to 72 vessels may participate in this program. The VMS monitoring system currently employed by NMFS to monitor vessel activity for the Atlantic Sea Scallop FMP, Northeast Multispecies FMP, and Atlantic Herring FMP is expected to be sufficient to monitor additional vessel activity (up to 72 more vessels) proposed under the GRA Access Program. Therefore, the implementation of the VMS system under the GRA Access Program is not expected to increase government costs.

A survey of small Northeast fishing vessels (less than 65 feet in length) whose primary gear was otter trawl and reported landings in New England indicated that average total operating cost per trip for small trawlers in 1996 was \$267. A survey of large Northeast fishing vessels (greater than 65 feet in length) whose primary gear was otter trawl and reported landings in New England in 1997 indicated that the average total operating cost per trip for large trawlers in 1997 was \$2,608. For both surveys, trip expenses were divided into eight categories (fuel, oil,

ice, food and water, lumpers fees, supplies, consignment fees, and other expenses). More detail on the surveys is presented in Amendment 13 to the Summer Flounder, Scup, and Black Sea Bass FMP.

The utilization of the proposed VMS system under the GRA Access Program may substantially increase operating costs and decrease profits for vessels that elect to participate in the program. Nevertheless, participation in this program is not mandatory and it is expected that individual vessels will assess changes in costs and revenues to their operations before they participate in this program. If a vessel owner chooses to participate in the program, it is likely that the additional costs of carrying an observer and using the modified gear would be offset by increased landings of non-exempt species (*Loligo* squid, silver hake (whiting), and black sea bass). As such, an increase in *Loligo* landings relative to 2003 would have positive economic impacts on the *Loligo* fishery, relative to the status quo. However, it is not possible to assess the exact monetary value associated with the additional harvest because quantitative data on these nets are limited.

The cost of one at-sea observer day for a NMFS-certified observer is approximately \$1,150, which would be paid by the vessel owner intending to fish in the GRAs. Fishing trips to the Southern GRA are expected to last approximately 4 days, and trips to the Northern GRA are expected to last approximately 3 days. Therefore, the total observer costs are estimated to be \$4,600 and \$3,450 for trips in the Southern and Northern GRAs, respectively. The observer costs would be in addition to operating costs. The average ex-vessel value (1996–1999) of *Loligo* in directed trips in the Southern GRA is \$24,013 and in the Northern GRA is \$4,456. These values are based on the average landings of *Loligo* from 1996–1999 in the GRAs, and the average ex-vessel value (1996–1999) of *Loligo*, adjusted to 2001 dollars. Therefore, the requirement to carry at-sea observers would increase vessel operating costs. However, larger vessels fishing in the Southern GRA would be most likely to recoup any increased operating costs due to their greater harvest capacity. The observer requirement is anticipated to impose a larger negative impact on the profits of vessels fishing in the Northern GRA given the average ex-vessel value of *Loligo* in directed trips, as described above. However, as described above, because only limited information must be collected under the GRA Access Program, NMFS is