**SUPPORTING STATEMENT**
**VESSEL MONITORING SYSTEM FOR ATLANTIC HIGHLY MIGRATORY SPECIES**
**OMB CONTROL NO. 0648-0372**

## A. JUSTIFICATION

### 1. Explain the circumstances that make the collection of information necessary.

The purpose of this collection of information is to comply with the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), the United States' obligations under the Atlantic Tunas Convention Act of 1975 (ATCA; 16 U.S.C. 971), other domestic Federal regulations, and the implementing regulations at 50 CFR part 635.

In this revision request, the National Marine Fisheries Service (NMFS) is proposing that Mobile Transmitting Unit (MTU) Vessel Monitoring System (VMS) units be replaced by Electronic Mobile Transmitting Unit (E-MTU) VMS units in Atlantic HMS fisheries subject to VMS requirements. These updated VMS units are capable of sending and receiving electronic messages. Using the updated E-MTU VMS units, NMFS also proposes implementing a declaration system through which vessels declare target species and gear deployed for fishing trips. These modifications would improve enforcement of HMS regulations.

VMS aids the NMFS Office of Law Enforcement (OLE) in monitoring and enforcing closed areas implemented to reduce bycatch of juvenile swordfish, sharks, sea turtles, and other species necessary to comply with the Marine Mammal Protection Act, Endangered Species Act, and National Standard 9 (bycatch and bycatch mortality reduction) of the Magnuson-Stevens Act. There are numerous areas that are closed to fishermen fishing for Atlantic highly migratory species (HMS) with pelagic and bottom longline gear onboard. Consistent with implementing regulations in place for the Atlantic Large Whale Take Reduction Plan (ALWTRP), shark gillnet vessels are required to use VMS at certain times of year to minimize the likelihood of interactions between fishing gear and marine mammals. Traditional methods of surveillance by ships and planes would be ineffective in patrolling such large areas. In HMS fisheries, VMS is designed to automatically report positions on all vessels carrying pelagic longline gear (at all times and all locations), bottom longline gear (vessels between 33°00' N. latitude and 36°30' N. latitude between January 1 and July 31 every year), or shark gillnet (all locations, between November 15 and April 15) gear on board.

By requiring that E-MTU VMS units be professionally installed and used to replace the dated MTU VMS units, NMFS will ensure that newer, more reliable, technology is in use, improve fisheries monitoring and enforcement of regulations, and provide NMFS enforcement agents with the ability to communicate directly with vessels at sea via electronic messaging and other means. With this newer technology, NMFS enforcement agents could: notify vessel operators of emergency changes to closed areas; provide notice of fishery closures in real time; inform operators of environmental disasters (oil rig fires/oil spills); send notice of dangerous weather; and receive distress or emergency transmissions.

NMFS is also proposing that, two hours prior to leaving port, fishermen provide NMFS enforcement with notice of the beginning of a fishing trip and a declaration of the target fishery and gear onboard. In addition, this proposed rule would require vessel operators to provide a minimum of three hours' advance notice of landing. Currently, vessel operators are required to turn on the VMS unit two hours before leaving port. Under this proposed rule, vessel operators would also need to declare the species being targeted and the gear being used. Creating a fishery declaration system would facilitate enforcement and compliance monitoring. Vessels may be permitted to participate in multiple fisheries that authorize numerous fishing gears. The declaration system would provide NMFS enforcement with advance notice of the target fishery and gear possessed onboard which provides enforcement with critical information concerning which regulations apply to that particular vessel during that trip.

Any new declaration system would be compatible with the capabilities of newly required E-MTU VMS units and consistent with declaration protocols currently employed in Council-managed fisheries. Additionally, the requirement to notify NMFS enforcement at least three hours prior to returning to port provides notification that fishing activities are being completed, gear is no longer being deployed, and the vessel is transiting back to port.

Vessels with E-MTU VMS units would be able to communicate through electronic messages with shore-based fishery personnel, which could allow fishery participants to: communicate directly with NMFS enforcement in the case of a power disruption; download updated E-MTU software without removal of the device; communicate with manufacturers to remedy malfunctions; receive required software upgrades with little interference; communicate with vessel owners and fish houses; and send distress calls to monitoring companies in the event of an emergency. Although some of these features are potentially useful functions, they are not the primary purpose of VMS and, it is important that fishermen not see them as a substitute for required safety equipment such as a properly installed and functioning Emergency Position Indicating Radio Beacon (EPIRB).

**2. Explain how, by whom, how frequently, and for what purpose the information will be used. If the information collected will be disseminated to the public or used to support information that will be disseminated to the public, then explain how the collection complies with applicable NOAA Information Quality Guidelines.**

The installation and activation checklist would be submitted one time after the new E-MTU VMS unit is installed by a qualified marine electrician. The checklist indicates the procedures to be followed by the marine electricians whom install the updated E-MTU VMS units. These forms would be completed by the electricians and then submitted to NMFS by the vessel owner. This checklist provides the OLE with information about the hardware installed and the communication service provider that will be used by the vessel operator. Specific information that links a permitted vessel with a certain transmitting unit and communications service is necessary to ensure that NMFS will receive automatic position reports properly. In the event that there are problems, NMFS will have access to a database that links owner information with installation information. NMFS can then contact the vessel operator and discern whether the problem is associated with the transmitting hardware or the service provider.

Existing MTU VMS units are programmed to report the vessel's location to National Oceanic and Atmospheric Administration (NOAA) OLE every hour, 24 hours a day, while the vessel is away from port. This allows vessels to traverse closed areas or remain at sea after a fishery has closed as long as they do not commence fishing operations. NOAA OLE uses VMS position data to reduce costs and improve enforcement of time/area closures, to monitor the fleet during the closed period, to deter illegal fishing, to increase efficiency of surveillance patrols, to provide probable cause for obtaining a search warrant in enforcement investigations, and to support enforcement of other regulations such as closed seasons once a quota has been reached. NMFS is now requiring that an updated E-MTU VMS unit be installed and used to transmit information. Because these units are capable of engaging in two-way communication and sending and receiving electronic messages, NMFS would also implement a fisheries declaration system. Two hours prior to leaving port to engage in fishing activities, vessels would provide NMFS OLE with a declaration of target species and gear being deployed for a particular trip. Before returning to port, vessels would again notify NOAA OLE three hours prior to landing after fishing activities have been completed. This information would allow NOAA OLE to more accurately track and monitor vessels for compliance in specific fisheries. Any new declaration system would be compatible with the capabilities of newly required E-MTU VMS units.

NOAA Information Quality Guidelines do not apply to this information collection because the information collected will not be disseminated to the public.

**3. <u>Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological techniques or other forms of information technology</u>.**

VMS is the best technology available at this time for monitoring vessel locations to aid enforcement efforts. The integrated Global Positioning System (GPS) provides a near real-time mechanism for submitting accurate position reports. VMS is considered much more accurate than logbooks for reporting geographical distribution of fishing effort for each trip. Logbooks are submitted by fishermen seven days after offloading and only provide information regarding the start of a fishing set. Thus, logbooks do not meet the real-time needs of enforcement and could allow vessels to fish illegally in closed areas without prosecution. VMS, on the other hand, provides 24 reports each day for the duration of the trip. Report data, in conjunction with a declaration by the vessel, two-hours prior to leaving port, would provide pertinent data concerning target species and gear being deployed. This information is important for discerning which closed areas apply to a particular vessel and allows enforcement to react immediately if a vessel is found fishing in a closed area.

MTU VMS units have been required in certain HMS fisheries since 2003. Recently, E-MTU VMS units have become available and are currently being used in Council-managed fisheries. These updated E-MTU units are capable of two-way communication which expands the potential for transmission of electronic information to/from NMFS. A fishery declaration system would be implemented where vessels send information to NOAA OLE concerning the target species and gear being deployed prior to leaving port to engage in fishing activities and after fishing is completed. Furthermore, vessels would be able to receive information from NOAA concerning weather alerts, natural disasters, fishery closures, and other information. The updated VMS units

may provide a platform for future electronic logbook reporting of both target and non-target species.

**4. Describe efforts to identify duplication.**

Position reports at the start of each fishing set are required of participants using the HMS logbook, and will therefore be duplicated by participants using VMS; however, VMS position reports are automated and would need to be sent every hour while vessels are away from port and would not require any action on the part of the vessel operator. Typically, most of the participants in the pelagic longline (PLL) fishery for tunas and/or swordfish use the HMS logbook. Vessels participating in the shark bottom longline (BLL) and gillnet fisheries use a different logbook (Coastal Fisheries Logbook) that does not require position reports of individual fishing set and would not be duplicated. If electronic catch reporting is developed in the future, paper logbooks may become obsolete.

There are no alternate sources of such specific and near real-time vessel location and activity information. Use of VMS is required in other fisheries and fishermen who have already purchased a VMS unit can use the same unit for multiple fisheries. Information is only reported one time to enforcement and not duplicated.

**5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.**

All owners of vessels with commercial permits for HMS, (*i.e.*, swordfish, sharks, and tuna) are considered small entities. Proposed VMS regulations would require the approximately 329 pelagic longline, bottom longline, and shark gillnet vessels to maintain their new VMS units at a daily cost of approximately $1.56/day (24 location reports + 2 declaration reports x $0.06/transmission). Individual position or message reports cost $0.06/transmission for both sending and receiving data. In an attempt to provide vessel owners with some flexibility, NOAA OLE has published general type approval specifications in the Federal Register (January 31, 2008; 73 FR 5813) describing the types of units that would be appropriate. Existing units that meet the criteria range in price from $3,100 - $3,600, depending on the features of the E-MTU VMS device. This provides vessel owners with some flexibility of choice and helps to minimize costs. Vessels are already required to use a MTU VMS in certain HMS fisheries, therefore, active vessels will need to purchase new equipment and cover updated operation and data transmission costs.

Currently, reimbursement funds ($3,100/E-MTU VMS unit) may be available for some HMS fishery participants required to upgrade to E-MTU VMS units. The reimbursement could only be applied to the costs of the updated unit and would not offset any costs incurred as a result of installation by a qualified marine electrician or of data transmission. Participants that have already received reimbursement funds from NOAA OLE for an E-MTU VMS may not be eligible to receive additional reimbursement funds.

**6. Describe the consequences to the Federal program or policy activities if the collection is not conducted or is conducted less frequently.**

Using VMS to verify the location of a vessel is passive and automatic, requiring no reporting time on the part of the vessel operator. ICCAT recognizes the developments in satellite-based VMS and their possible utility, including better resource management and, thus, more effective and sustainable use of resources. More specifically, benefits for management include increased compliance with and enhanced enforcement effectiveness regarding area restrictions, more timely data regarding fishing effort by areas, and more timely catch reporting. Other possible benefits of the VMS include increased vessel safety and dependable and confidential communications, which may improve fleet management.

Monitoring and enforcement are essential components of fisheries management. Monitoring fishing vessels facilitates enforcement of NMFS' conservation and management regulations by enabling detection of violations. Monitoring also promotes compliance by having a general deterrent effect. Lack of proper monitoring and enforcement makes it difficult to gauge the effectiveness of conservation and management measures. In the case of overfished stocks, enforcement is necessary to prevent further overfishing and subsequent decline to dangerously low stock levels. As a practical matter, it is very difficult for enforcement personnel to effectively monitor the full operational range of the U.S. pelagic longline fleet without having some method of detecting a vessel's location. With respect to pelagic longline time/area closures in particular, the size of the closed areas makes the likelihood of detection through conventional surveillance methods rather small.

The use and submission of a checklist, completed by a qualified marine electrician, is required only for the initial installation or when the hardware or communications service provider changes.

Less frequent reporting would prevent NMFS and the vessel operator from confirming that the system is functioning properly and would make it more difficult to determine whether a vessel is fishing in, or transiting through a closed area. Furthermore, not requiring vessels to make a declaration before leaving port describing target species and gear deployed would make it difficult for NOAA OLE to know which closed areas and other regulations apply to that particular vessel.

**7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.**

VMS will be reporting positions 24 times a day, which is more frequent than OMB guidelines suggest. This frequency is required for the near real-time and accurate tracking of vessel activities. The requirement for 24 position reports per day is designed to allow NMFS to distinguish between a vessel that is setting gear, and a vessel that is traversing a closed area. Fewer reports would indicate that a vessel was in the area but would not indicate whether the vessel was setting gear or traversing the area. The time burden as a result of this frequency, however, remains minimal because the position reports are automated and require no action on the part of the vessel operator. As stated above, the two-time (per trip) declaration would

facilitate improved enforcement of regulations because NOAA OLE would know which gear is being deployed and the relevant target species for individual trips.

**8. Provide information on the PRA Federal Register Notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.**

A proposed rule 0648-BA64 seeking public comment will be published coincident with the submission of this information collection request.

**9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.**

No payments or gifts are to be offered as part of this information collection.

**10. Describe any assurance of confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy.**

As stated on the VMS installation and activation checklist, all automated position reports and declaration reports received by NMFS will be treated as confidential data in accordance with the Magnuson-Stevens Act and NOAA Administrative Order 216-100.

**11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.**

No questions of a sensitive nature are asked.

**12. Provide an estimate in hours of the burden of the collection of information.**

A total of 329 vessels are subject to the updated VMS requirements (Table 1). Based on the number of limited access (directed and incidental) permits for swordfish, an estimated 249 pelagic longline vessels are subject to the VMS requirement. Based on the number of limited access directed shark permits, an estimated 50 bottom longline shark fishing vessels and 30 shark gillnet vessels are also subject to the VMS requirement. Once the updated VMS is installed by a qualified marine electrician, the vessel owner would be required to submit a activation checklist via regular mail to NOAA OLE. **The estimate for this burden is 5 minutes per participant**. Prior to engaging in fishing activities the vessel operator must turn the system on two hours before leaving port and verify that the system is functioning properly. At that time, vessels would transmit an electronic message to NOAA OLE declaring target species and gear deployed for the fishing trip. Vessels would also report to NOAA OLE when they are returning to port. **NMFS estimates that these declarations would require approximately 10 minutes per trip**

**(2 declarations, 5 minutes/declaration)).** Once on, position reports are automatically sent from the VMS on an hourly basis. The automatic position reports are not considered burden to the respondents. *Burden associated with maintenance is not anticipated with the updated E-MTU VMS units.*

**Table 1. Number of HMS Vessels Required to Comply with VMS Requirements by Gear Type Based on 2010 Permit Data.**

| **Pelagic Longline (Swordfish Directed + Swordfish Incidental)** | **Bottom Longline (Directed and Incidental Shark Permit Holders in NC, SC, and VA)** | **Gillnet (Vessels with a Directed Shark Permit and Landed Sharks with Gillnet, 2004-2007)** | **Total** |
|---|---|---|---|
| 249 | 50 | 30 | 329 |

**Pelagic Longline Vessels:**
Trip duration within the PLL fleet varies based on time of year, location, target species, market prices, quota availability, and other factors. Logbook data from 2006-2009 indicate that the average trip duration for PLL vessels was 9 days. It is assumed that vessels need at least one day in port to offload their catch and procure supplies before returning to sea, during which time they would not be required to provide position reports. On average, PLL vessels may take 36 trips per year, which equals 324 days per year at sea (36 trips/year * 9 days/trip = 324).

**One-time burden:**
Total responses: 249 (installation considered part of activation response) annualized to 83.
Installation time: average of 4 hours x 249 = 996 hours.
Submission of completed installation checklist: 5 minutes x 249 = 1,245 min/60 min. = 20.41 hours.
Total hours: 1,016.41, annualized to 338.8 (339) hours.

**Recurring burden:**
Per vessel responses: 36 trips/year * 2 declarations = 72 declarations. Total responses: 72 * 249 = **17,928**.
36 trips/year * 2 declarations/ * 5 minutes/declaration / 60 minutes/hour = 6 hours/vessel).
Estimated burden for the entire PLL fleet would be 1,494 hours (249 vessels * 6 hours/vessel = **1,494 hours**).

**Total annualized/annual responses: 83 + 17,928 = 18,011.**
**Total annualized/annual hours: 339 + 1,494 = 1,833.**

**Shark Bottom Longline Vessels:**
All vessels with bottom longline gear onboard are required to use VMS from January 1 to July 31 when they are between 33 N and 36.3 N on an annual basis.

During this time period (January-July) and in this vicinity, most participants with bottom longline on board would be targeting large coastal sharks (LCS). It is assumed that most vessels targeting LCS would be making day-trips (i.e., returning to port to offload once every 24 hours). For the purpose of estimating the potential burden of this requirement participants *could* also be fishing for small coastal sharks and pelagic sharks which are typically open for the duration of the time period in this area. Therefore, it is assumed that vessels could be in this vicinity with BLL gear onboard for 212 days/year (January 1 – July 31).

**One-time burden:**
Total responses: 50 (installation considered part of activation response) annualized to 17.
Installation time: average of 4 hours x 50 = 200 hours.
Submission of completed installation checklist: 5 minutes x 50 = min/60 min. = 4.2 hours.
Total hours: 204, annualized to (68) hours.

**Recurring burden:**
Per vessel responses: 212 trips/year * 2 declarations = 424 declarations. Total responses: 424 * 50 = **21,200**.
212 trips/year * 2 declarations/ * 5 minutes/declaration / 60 minutes/hour = 35.3 hours/vessel.
Estimated burden for the entire BLL fleet would be hours (50 vessels * 35 hours/vessel = **1,767 hours).**

**Total annualized/annual responses: 17 + 21,200 = 21,217 responses.**
**Total annualized/annual hours: 68 + 1,767 = 1,835 hours.**

**Directed Shark Gillnet Vessels**:
Vessels that possess a shark directed permit and have gillnet gear onboard between November 15 and April 15 would be required to use VMS when they are away from port in the Southeast U.S. Restricted Area as defined in 50 CFR 229.32.

The gillnet fishery primarily targets small coastal sharks (SCS) and blacktip sharks (included in the non-sandbar LCS complex). Season length for sharks varies from year to year based on quota availability, catch rates, and other considerations. Many shark gillnet vessels possess permits which allow them to participate in other fisheries using gillnet gear, therefore, to estimate burden it is assumed that affected vessels could be engaged in fishing activities and subject to VMS requirements for the duration of this time period every year (152 days).

**One-time burden:**
Total responses: 30 (installation considered part of activation response) annualized to 10.
Installation time: average of 4 hours x 30 = 120 hours.
Submission of completed installation checklist: 5 minutes x 30 = 150 min/60 min. = 2.5 hours.
Total hours: 123, annualized to (42) hours.

**Recurring burden:**
Per vessel responses: 152 trips/year * 2 declarations = 304 declarations. Total responses: 304 * 30 = **9,120**.
152 trips/year * 2 declarations/trip * 5 minutes/declaration / 60 minutes/hour = 25.3 hours/vessel. Estimated burden for the entire gillnet fleet would be hours (30 vessels * 25.3 hours/vessel = **760 hours**).

**Total annualized/annual responses: 10 + 9,120 = 9,130 responses.**
**Total annualized/annual hours: 42 + 760 = 802 hours.**

**Table 2 Summary of the estimated burden for PLL, BLL, and gillnet vessels.**

| | PLL vessels | BLL vessels | Gillnet vessels | Total |
|---|---|---|---|---|
| **Respondents** | 249 | 50 | 30 | 329 |
| **Responses** | 18,011 | 21,217 | 9,130 | 48,358 |
| **Hours** | 1,833 | 1,835 | 802 | 4,470 |

**13. Provide an estimate of the total annual cost burden to the respondents or record-keepers resulting from the collection (excluding the value of the burden hours in Question 12 above).**

In the table below, purchase and installation costs for the 329 vessels required to have VMS are one- time costs and are not included in subsequent years' annual cost burden estimates. Note that there is no submission cost for the activation checklist.

**Table 3. Summary of the total costs associated with the revised E-MTU VMS requirements in Atlantic HMS fisheries.**

| | Pelagic Longline Vessels (249) | Bottom Longline Vessels (50) | Gillnet Vessels (30) |
|---|---|---|---|
| **E-MTU VMS Unit (one-time)** | $3,100 | $3,100 | $3,100 |
| **Installation Costs (one-time)** | $50-400 ($200 used for estimation purposes) | $50-400 ($200 used for estimation purposes) | $50-400 ($200 used for estimation purposes) |
| **Annualized purchase and installation costs per vessel** | $1,100 ($3,100 + $200/3) | $1,100 | \$1,100 |
| **Daily Position Report Costs** | $1.44 | $1.44 | $1.44 |
| **Days Fishing/Year** | 324 | 212 | 152 |
| **Position Report Costs/Year** | $466.56/vessel | $305.28 | $218.88 |
| **Number of Fishing Trips/Year** | 36 | 212 | 152 |

| | Pelagic Longline Vessels (249) | Bottom Longline Vessels (50) | Gillnet Vessels (30) |
|---|---|---|---|
| **Gear/Spp. Declaration Costs ($0.12/trip)/Year** | $4.32 | $25.44 | $18.24 |
| **Total Estimated Costs/Vessel (Year 1)** | $3,770.88 | $3,630.72 | $3,537.12 |
| **Total Costs by Fleet** | $938,949 | $181,536 | $106,113 |
| **Gross Cost of Compliance, Year One (all HMS vessels)** | $1,226,598 | | |
| **Potential Reimbursement Funds ($3,100/vessel)** | $1,019,900 | | |
| **Compliance Costs (Year 1) (avg. cost/vessel) if reimbursement funds are made available** | $206,698 ($628/vessel) | | |
| **Compliance Costs/Vessel (Year 2 and Beyond)** | $471 | $331 | $237 |

Note: Although $1,019,900 may be available as reimbursement funds, we are currently requesting approval for the full capital and start-up funds of $1,226,598.

**Total maximum *annualized* capital and start-up expenses of $1,100 per vessel (x 329 vessels) will be $361,900.**

**Total annually recurring reporting costs will be ($471 x 249 = $117,279) + ($331 x 50 = $16,550) + ($237 x 30 = $7,110): $140,939.**

**14. <u>Provide estimates of annualized cost to the Federal government</u>.**

There would be no significant cost to the Federal government outside of the initial reimbursement. NMFS is developing an integrated hardware and tracking system to manage the various VMS programs being developed for many other U.S. fisheries. Those costs are already covered by current programs of the Office of Law Enforcement and are extraneous to this collection. Given the current capacity of these systems, incremental costs specifically attributable to the HMS VMS program are negligible.

**15. Explain the reasons for any program changes or adjustments.**

Adjustment(s): The number of affected vessels has changed from 292 to 329.

Program changes: The hours and costs are changed to reflect changes to VMS equipment, maintenance, and installation costs and reporting requirements.

1. Purchase and installation of 329 new VMS units.
2. Removal of $500 annual repair/maintenance responses and expenses for 292 current VMS units.
3. Addition of $0.12 data transmission costs per trip for 292 units and $1.12 for the additional 37.

**16. For collections whose results will be published, outline the plans for tabulation and publication.**

No formal scientific publications based on this program are planned at this time. The data will be used for enforcement, management reports, and drafting or evaluating fishery management plan amendments by NMFS. However, subsequent use of the data collected over a series of years may be included in scientific papers and publications. Position data will remain confidential and will only be revealed to the public in aggregated form.

**17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.**

Not Applicable.

**18. Explain each exception to the certification statement.**

There are no exceptions.

## B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

This collection does not employ statistical methods.